Philips Color Pro-Vision System

VSS8250/00T

VS82505T

Service
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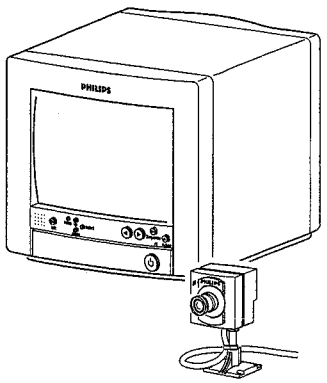

NORTH-AMERICAN MODELS:
Service Manual: 8056

Service Manual

Safety regulations require that the set be restored to its original condition and that parts which are identical with those specified be used.

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PCS 81 025

PHILIPS

1. Technical data

Power supply	
Mains voltage	: 90-267 V AC ± 10% 50 Hz & 60 Hz
Power consumption	: 16 W (with one camera)
Camera supply	: 22 V DC
Picture Tube	
Dimensions	: 14 inch
Deflection angle	: 90 degrees
EHT	: 25kV
Visible screen area	: 256 x 182.8 mm
Slot triplet pitch	: 0.42 mm
Video Input/output signals	
CVBS signal	: 1 VP-P
Camera input	: 4 wire telephone cable
Alarm output	: 3 pole screwblock
Audio	: 177 mV RMS 10 kΩ input impedance
Loudspeaker	: 25Ω, 200 mW
Microphone	: build in, electret
Input signal connectors	
CVBS	: BNC
Audio (Mono)	: BNC
Camera	: Telephone connector
Ambient conditions	
- temperature (operation)	: +5 to +45° C
- temperature (storage)	: -25 to +70° C
- humidity	: 20 to 95 % RH
Dimensions	: 350*325*385 (W*H*D)
Weight	: 12,5 kg.

2. System configuration

This Philips Color Pro-Vision System consists of:

System:	**VSS8250/00T**	**VS82505T**
System monitor	VM5	VM5
Video Camera (incl. 25 m. cable) (incl. mounting material)	VCM9175/00T	VC91755T
Accessories are:		
Intercom box	VSS2901/00	VSS29010
Alarm box	VSS2902/00	VSS29020
Interface box	VSS2903/00/01	VSS29035
Cable extension set	VSS2904/00/01	VSS29045
Action box	VSS2905/00	VSS29050
Junction box	VSS3901/00T	VS39015T
Extra camera	VCM9175/00T	VC91755T
Slave monitor	VSS9451/00T	VS94515T
Protective camera housing	VCM1152	VCM1152

3. Survey of service manuals

		North-American Service Manual
VCM9175/00T - VC91755T	4822 727 20502	8058
VSS2901/00 - VSS29010	4822 727 20389	8048
VSS2902/00 - VSS29020	4822 727 20391	8049
VSS2903/00/01 - VSS29035	4822 727 20392	8050
VSS2904/00/01 - VSS29045	4822 727 20393	8051
VSS2905/00 - VSS29050	4822 727 20394	8052
VSS3901/00T - VS39015T	4822 727 20503	8059
VSS9451/00T - VS94515T	4822 727 20056	8063
CM1000- Circuit Description	4822 727 16874	8064

4. System function / features

System functions:

Next to being extremely easy and ready to install by means of the ordinary everywhere obtainable telephone cable, this new universal Colour "Philips Color Pro-Vision System" has been designed for those users whose needs for observation, surveillance and monitoring required additional features.
When combined with the many available accessories, this system can function as:

- colour observation system
- intercom system
- alarm system
- action trigger system, all supported with vision and sound
- VCR multiplex recording system
- all supported with vision and sound, "On Screen Display" and installer/user friendly status and options select menus

System features:

The Colour monitor is the heart of the Philips Color Pro-Vision System with:

- 4 system camera in/outputs for audio/video, alarm and action
- 1 system junction box in/output
- VCR audio/video in/output
- VCR multiplex input
- Slave monitor audio/video output
- Alarm output

Further build-in feature are:

- camera instant on
- Manual camera selection
- Permanent on-screen display of;
  - display mode
  - camera number
  - alarm armed/triggered
  - time and date
- OSD menu with status display for programming and installation
- VCR replay, last selected camera signal present at VCR output
- Automatic recognition of connected Junction boxes and cameras at power-up
- Monitor audio/video stand-by mode, ensures continuous functioning of the system
- System (keyboard) lock mode with password protection
- System wiring diagnosis and short-circuit protection
- Prepared for system expansion with more cameras (junction boxes) and/or alarm, action and intercom functions in each of the camera lines

5. System expansion

The system can be expanded for economic installation and/or more cameras through one (for up to 7) or two (for up to 10) optional available junction boxes. The system can also functionally expanded with several optionally available accessory boxes. By simple placing these in series with each camera channel it provides:

- Intercom, with doorbell function.
- Alarm, with in/out function switchable (on/off) for each separate camera.
- Action, with triggering a remote action in the active camera line by triggering the relay in the action box.
- Slave monitor, with loopthrough capability to expand the system by additional extra monitors.
- Interface adapter, allows to connect Philips RF cameras or any standard B/W/ camera with a VBS signal output.
- Cable extension set, to enlarge the distance upto 300m.
- Extra junction box
- Extra cameras

6. Controls and connections

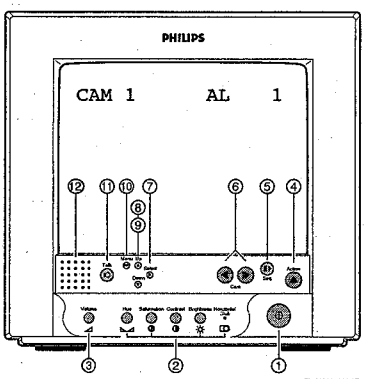


Figure A

1. Stand-by knob
2. Brightness knob
3. Contrast knob
4. Volume knob
5. Camera selection keys
6. Auto sequence knob
7. VCR playback mode knob
8. Talk knob (for the intercom)
9. Loudspeaker
10. Action knob

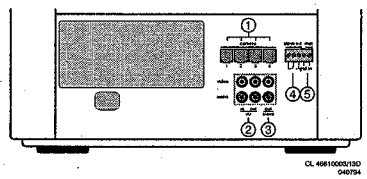
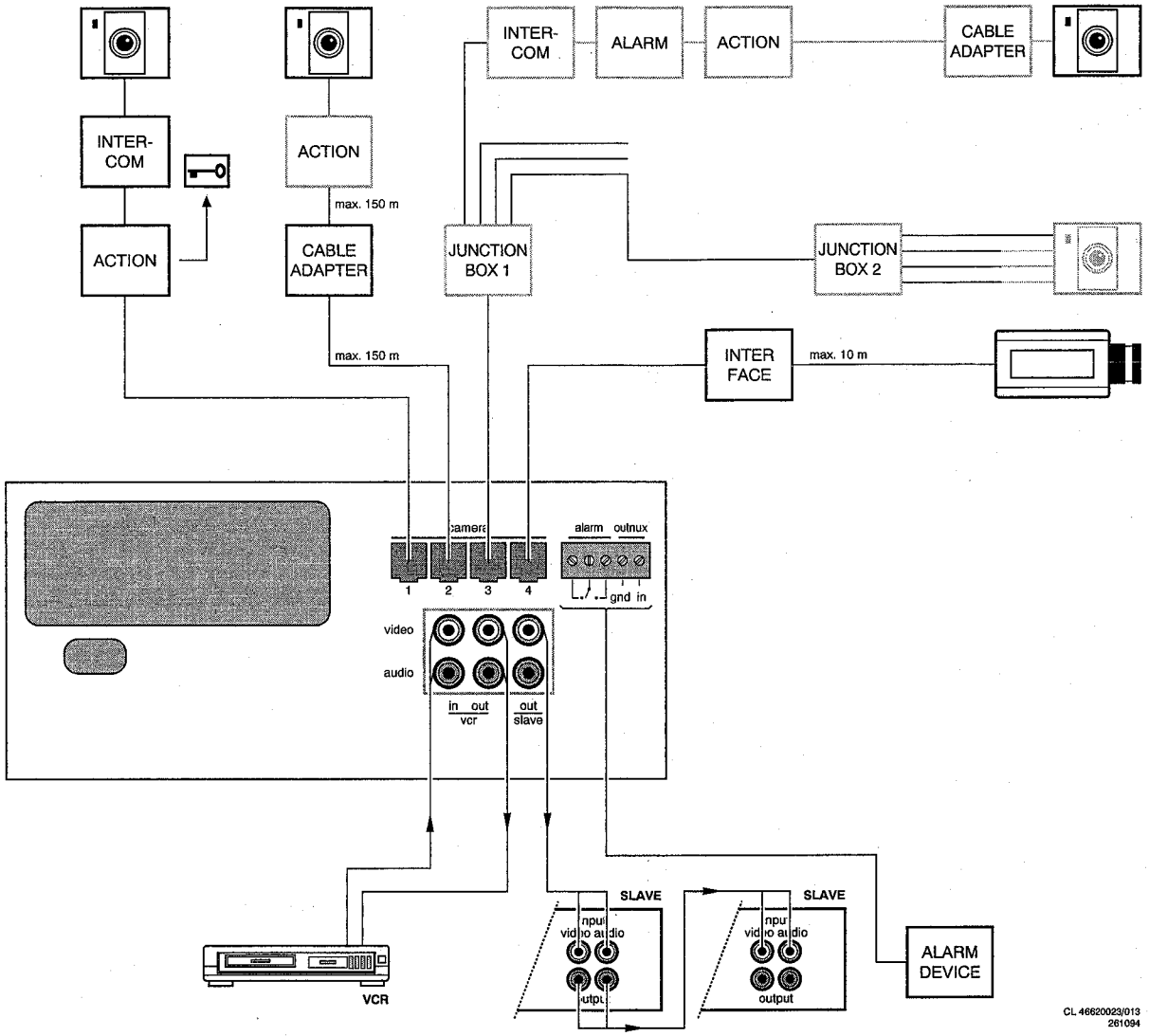


Figure B

1. Camera connection block
2. VCR input / output
3. Slave input / output
4. Auto sequence selector
5. Alarm output block

7. Connection possibilities



8. Safety instructions, Maintenance instruction, Warnings and Notes

Safety Instructions for Repairs

1. Safety regulations require that during a repair:
   - the set should be connected to the mains via an isolating transformer;
   - safety components, indicated by the symbol ⚠, should be replaced by components identical to the original ones;
   - when replacing the CRT, safety goggles must be worn.
2. Safety regulations require that after a repair the set must be returned in its original condition. In particular attention should be paid to the following points:
   - As a strict precaution, we advise you to resolder the solder joints through which the horizontal deflection current is flowing, in particular:
     - all pins of the line output transformer (LOT);
     - fly-back capacitor(s);
     - S-correction capacitor(s);
     - line output transistor;
     - pins of the connector with wires to the deflection coil;
     - other components through which the deflection current flows.

Note:
This resoldering is advised to prevent bad connections due to metal fatigue in solder joints and is therefore only necessary for sets older than 2 years.

- The wire trees and EHT cable should be routed correctly and fixed with the mounted cable clamps.
- The insulation of the mains lead should be checked for external damage.
- The mains lead strain relief should be checked for its function in order to avoid touching the CRT, hot components or heat sinks.
- The electrical DC resistance between the mains plug and the secondary side should be checked (only for sets which have a mains isolated power supply). This check can be done as follows:
  - unplug the mains cord and connect a wire between the two pins of the mains plug;
  - measure the resistance value between the pins of the mains plug and the metal shielding of the tuner or the aerial connection on the set. The reading should be between 4.5 MΩ and 12 MΩ;
  - remove the wire between the two pins of the mains plug.
- The cabinet should be checked for defects to avoid touching of any inner parts by the customer.

Maintenance instruction

It is recommended to have a maintenance inspection carried out by a qualified service employee. The interval depends on the usage conditions:

- When the set is used under normal circumstances, for example in a living room, the recommended interval is 3 to 5 years.
- When the set is used in circumstances with higher dust, grease or moisture levels, for example in a kitchen, the recommended interval is 1 year.

The maintenance inspection contains the following actions:

- Execute the above mentioned 'general repair instruction'.
- Clean the power supply and deflection circuitry on the chassis.
- Clean the picture tube panel and the neck of the picture tube.

Warnings

1. When a camera or accessory is connected or disconnected, the monitor **should** always be disconnected from the mains supply. Only operating the **stand-by** knob is not sufficient !

2. In order to prevent damage to **ICs** and transistors, all high-voltage flash-overs must be avoided. In order to prevent damage to the picture tube, the method shown in Fig. 8.1 should be used to discharge the picture tube. Use a high-voltage probe and a multimeter (position DC-V). Discharge until the meter reading is **0V** (after approx. 30s).

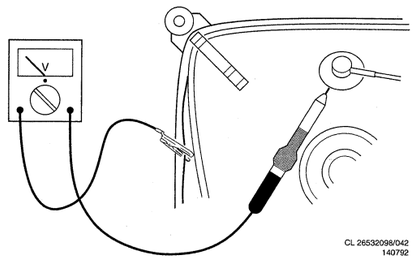


Fig. 8.1

3. **ESD**

   All **ICs** and many other semiconductors are sensitive to electrostatic discharges (ESD). Careless handling during repair can drastically shorten the life. Make sure that during repair you are connected by a pulse band with resistance to the same potential as the earth of the unit. Keep components and tools also at this same potential.

4. Be careful when taking measurements in the high-voltage section and on the picture tube panel.

5. When making settings, use plastic rather than metal tools. This will prevent any short-circuit and the danger of a circuit becomes unstable.

6. Never replace modules or other components while the unit is switched on.

7. After repair the wiring should be fastened once more in the cable clamps for this purpose.

8. It is recommended to connect first the cameras to the camera inputs, before switching on the monitor. In this way you can prevent short circuit of camera input during camera connection and therefore prevent damaging of input transistor.

9. When no input signals are connected to the monitor, the screen will be blanked.

Notes

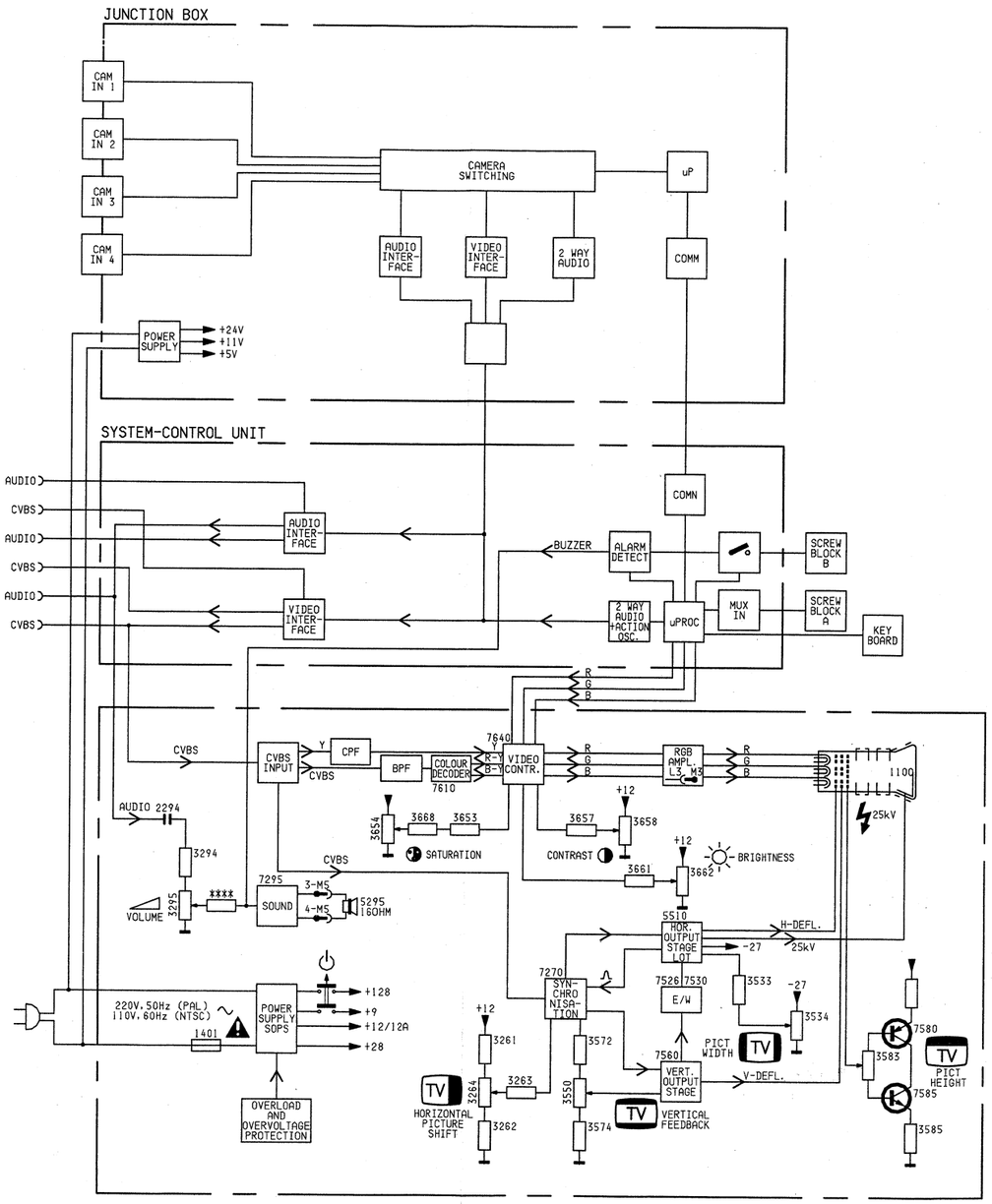
1. The direct voltages and oscillograms are average voltages. They have been measured by using a pattern generator and under the following conditions:
   - Set the brightness Control at centre click position.
   - Set the contrast control at maximum position.
   - Set the saturation front control to 3/4 of its range.
   - Signal pattern: grey-scale.
   - Volume control in minimum position.

   Remark: Apply pattern generator connected via camerabox VSS2903/00T to camera input 1.

2. The semiconductors indicated in the circuit diagram(s) and in the parts lists are completely interchangeable per position with the semiconductors in the unit, irrespective of the type indication on these semiconductors.

3. This Observation Colour Monitor is based on Computer CGA Colour Monitor Chassis CM1000. The circuit description for CM1000, service code: 4822 727 16874.

9. Block diagram



VM5-COLOUR MONITOR

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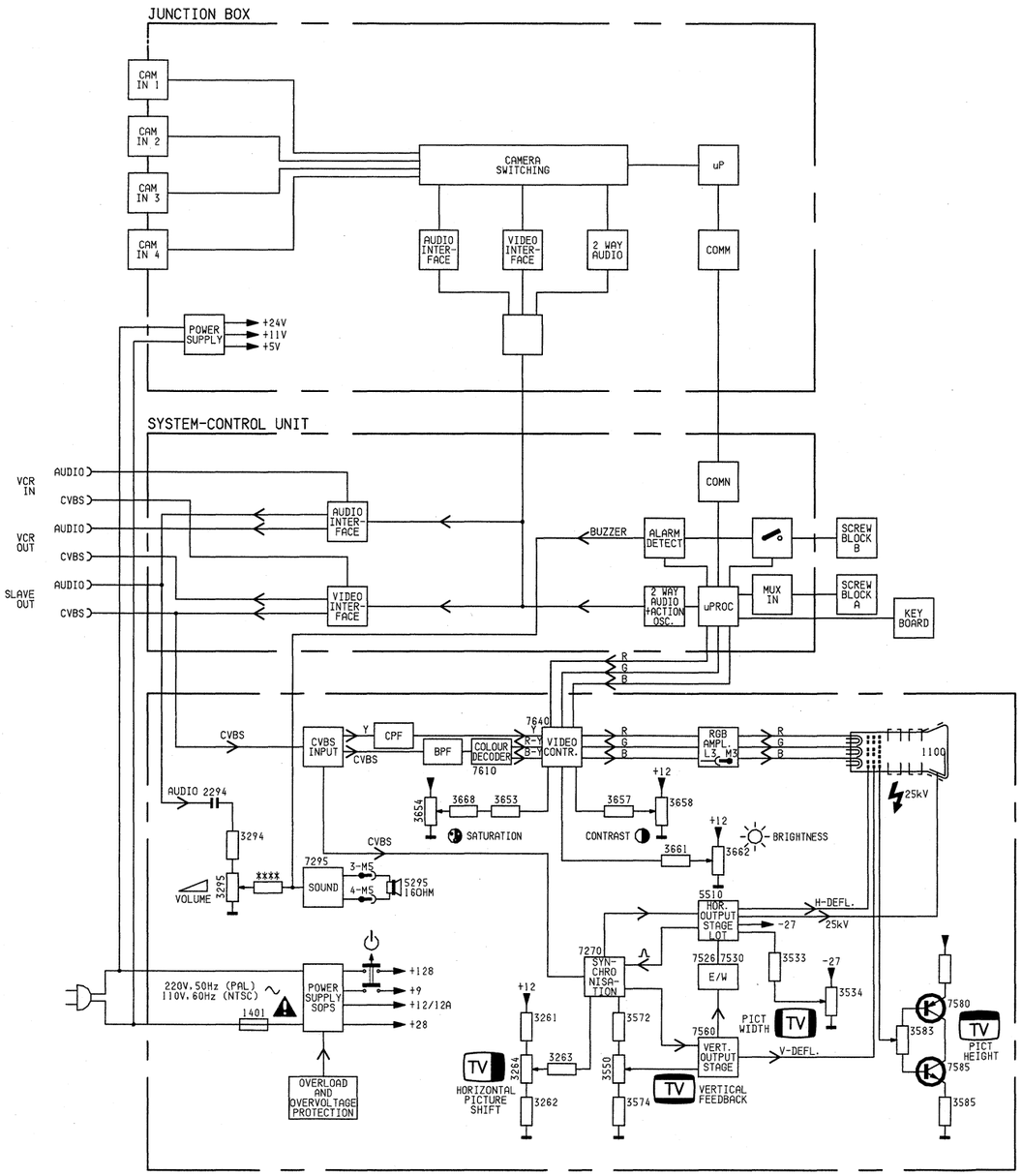
9. Block diagram



VM5-COLOUR MONITOR

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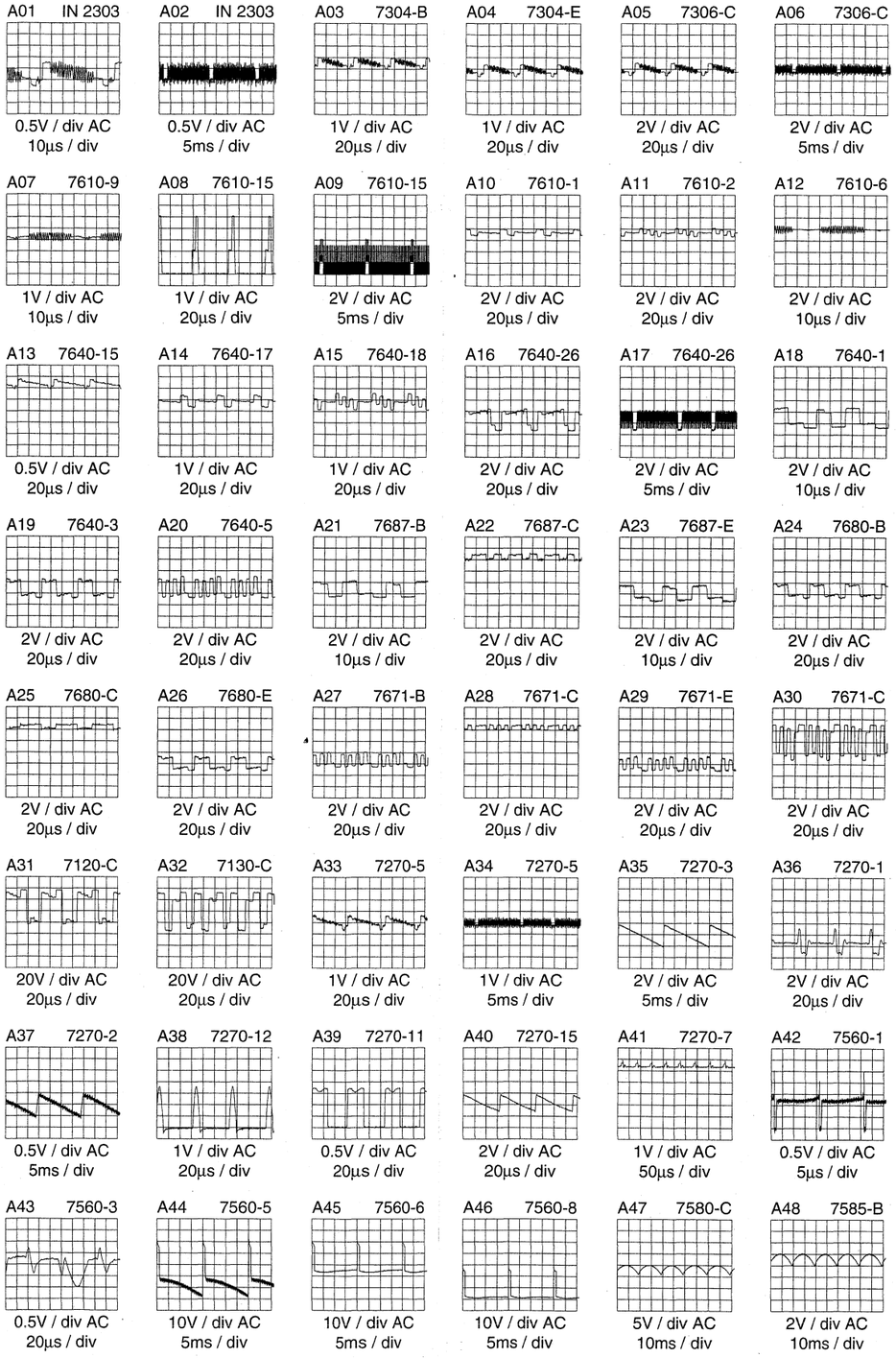
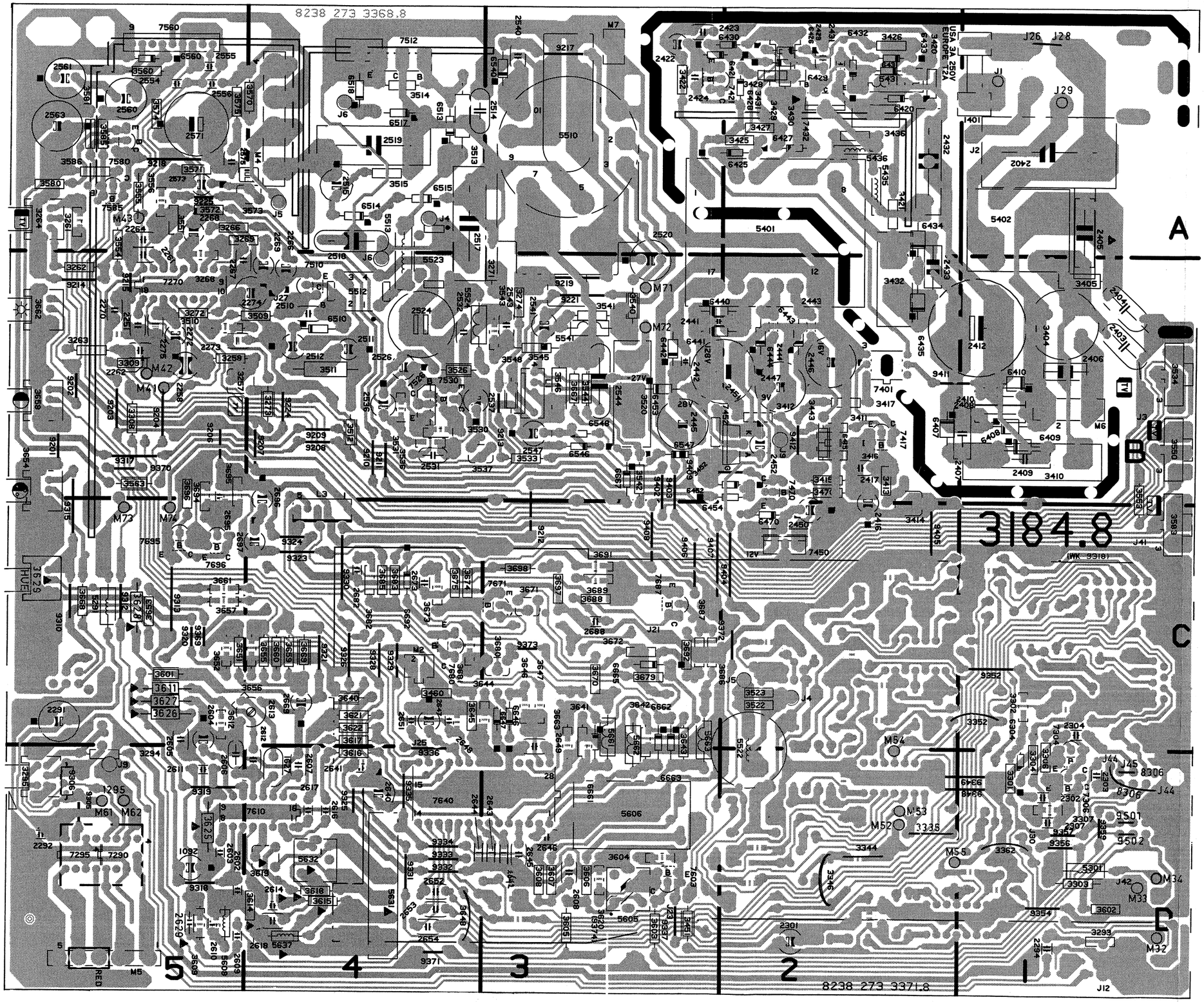


Main panel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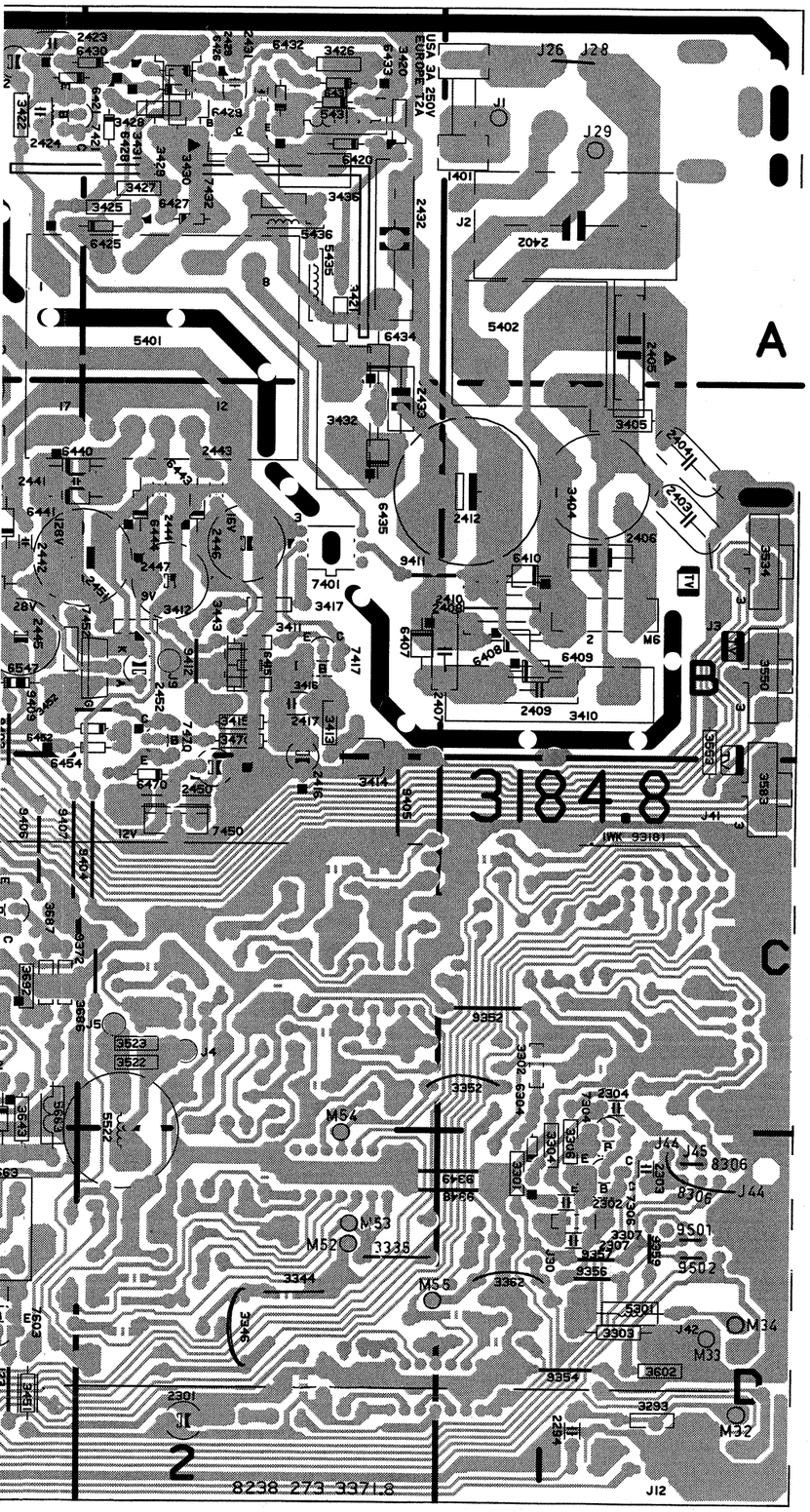
CRT panel



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2451	B2	3321	D3	3585	A5	6316	C2	9224	B4	SK5	D1
2452	B2	3322	D2	3586	A5	6317	C2	9225	A5		
2510	B4	3323	D2	3601	C5	6318	C2	9305	D5		
2511	B4	3323	D2	3602	D1	6320	D2	9306	D5		
2512	B4	3324	D2	3603	D3	6321	D2	9308	C5		
2514	A4	3325	D2	3604	D3	6322	D2	9310	C5		
2515	A4	3325	D2	3605	D3	6323	D2	9312	C5		
2517	A4	3326	D2	3606	D3	6324	C2	9313	C5		
2518	A4	3327	D2	3607	D3	6328	C2	9315	C5		
2519	A4	3328	C2	3608	D3	6329	C2	9316	C5		
2520	B3	3328	C2	3609	D5	6361	D1	9317	B5		
2524	B4	3329	D2	3609	D5	6407	B2	9318	D5		
2526	B4	3329	D2	3611	C5	6408	B1	9319	D5		
2531	B4	3330	C2	3612	C5	6409	B1	9320	C5		
2532	B4	3331	C1	3614	D4	6410	B1	9321	C4		
2536	B4	3332	C1	3615	D4	6415	B2	9322	C4		
2537	B4	3333	C1	3616	D4	6420	A2	9323	C4		
2540	A3	3334	C1	3617	D4	6421	A3	9324	C4		
2541	B3	3335	D2	3618	D4	6425	A2	9325	D4		
2543	B3	3336	C1	3619	D4	6426	A2	9326	C4		
2544	B3	3337	C1	3620	D3	6427	A2	9327	C4		
2547	B3	3337	C1	3621	C4	6428	A2	9328	C4		
2554	A5	3340	D2	3622	C4	6429	A2	9329	C4		
2555	A5	3341	D2	3625	D5	6430	A2	9330	C4		
2556	A5	3342	D3	3626	C5	6431	A2	9331	D4		
2560	A5	3344	D2	3627	C5	6432	A2	9332	D4		
2561	A5	3344	D2	3628	C5	6433	A2	9333	D4		
2563	A5	3345	D2	3629	C5	6434	A2	9334	D4		
2571	A5	3346	D2	3640	C4	6435	B2	9335	D4		
2573	A5	3347	C1	3641	D3	6440	B3	9336	D4		
2575	A5	3350	D3	3641	D3	6441	B3	9337	D3		
2601	D5	3351	C1	3642	C3	6442	B3	9340	D2		
2602	D5	3352	C1	3642	D3	6443	B2	9341	D2		
2603	D5	3353	C1	3643	D3	6444	B2	9342	D2		
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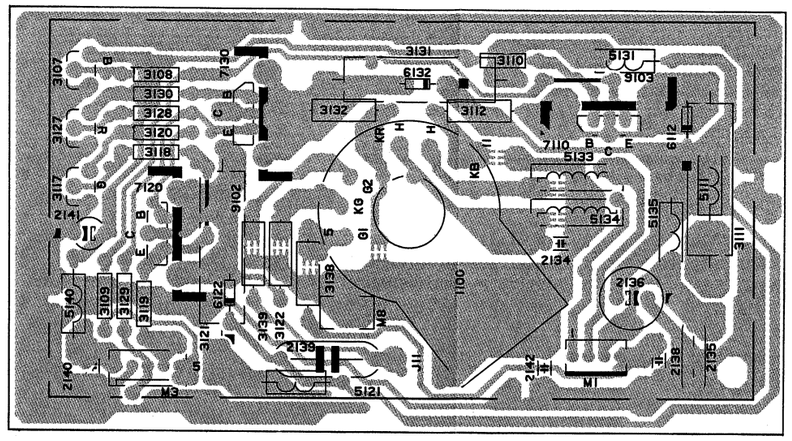
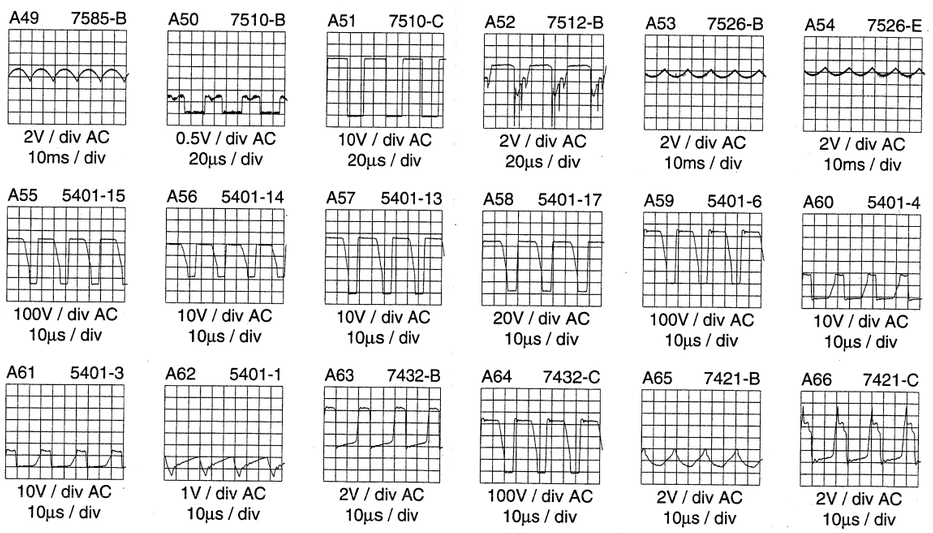
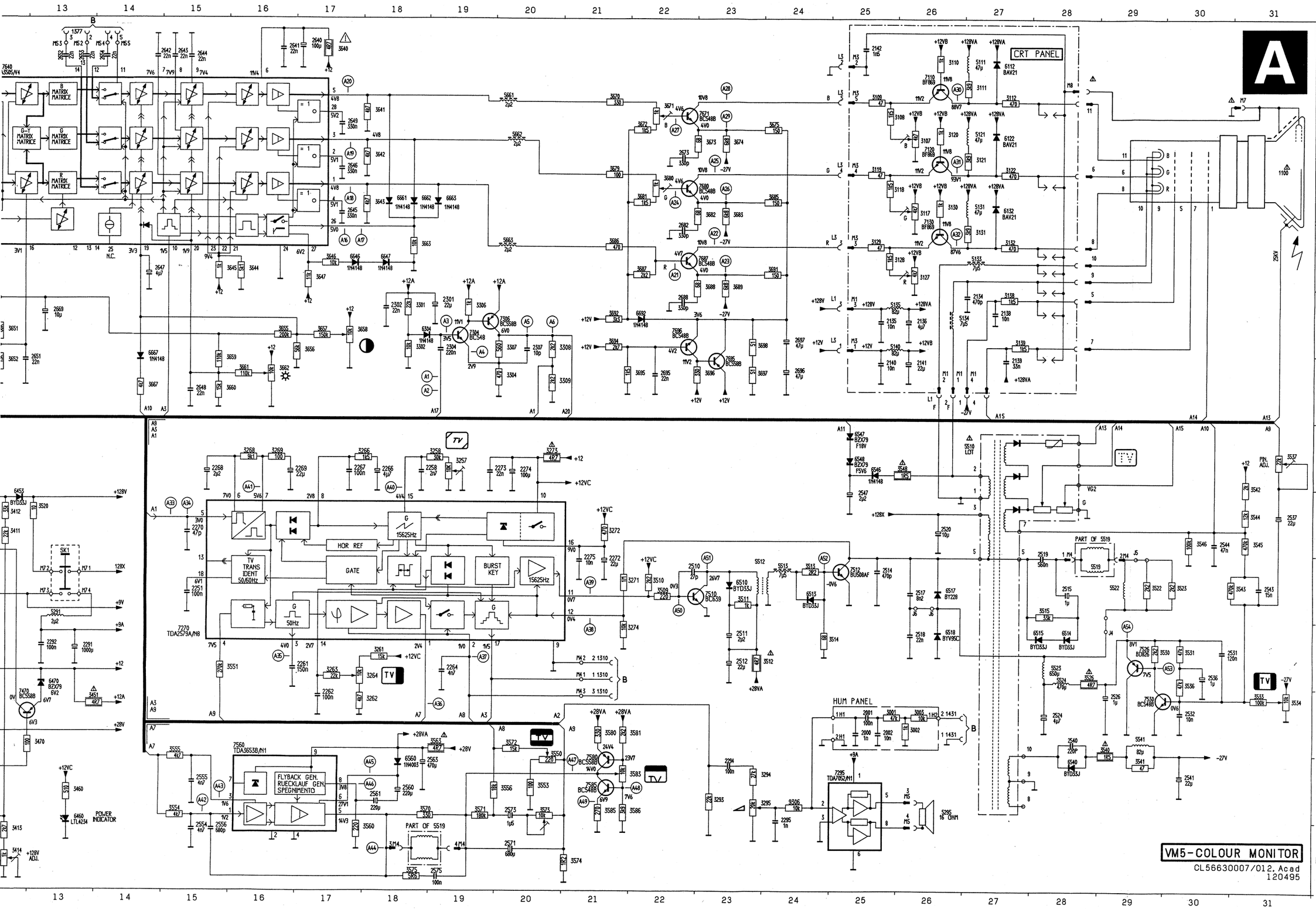




Main panel



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J5	H29	2651	F13	3660 F16
J6	I 26	2652	A13	3661 F16
J6	I 28	2653	A13	3662 F16
J9	J11	2654	A14	3663 D18
M1	E25	2669	E13	3687 F14
M1	F26	2673	B22	3688 E11
M1	F28	2682	D22	3689 E12
M1	F27	2688	E22	3670 B21
M3	A25	2695	F22	3671 B22
M3	B25	2696	F24	3672 B22
M3	C25	2697	E24	3673 B23
M3	D25	3001	K25	3674 B23
M3	E25	3002	K26	3675 B24
M4	H28	3003	K26	3679 C21
M4	I 29	3108	B26	3680 C22
M4	M18	3109	B25	3681 C22
M4	M19	3110	A28	3682 C23
M5	L26	3111	B27	3683 C23
M5	M26	3112	B27	3685 C24
M6	I 4	3118	C26	3686 D21
M6	I 4	3119	C25	3687 D22
M6	A28	3120	B26	3688 E23
+12A	C1	3121	C27	3689 E23
1231	E1	3122	C27	3691 D24
1231	E1	3128	D26	3692 E21
1231	E1	3129	D25	3694 E21
1310	J21	3130	C26	3695 F22
1310	J21	3131	D27	3696 F23
1310	K21	3132	D27	3697 F23
1377	A13	3136	E27	3698 E23
1401	H4	3139	E27	5104 I 4
1431	K26	3257	G19	5111 A27
1431	K26	3258	G19	5121 B27
1627	E8	3281	J18	5131 C27
2000	K25	3282	K18	5133 D27
2001	K25	3283	J17	5134 E26
2002	K25	3284	J18	5135 E25
2134	E27	3285	I 8	5140 E25
2135	E25	3288	G16	5291 I 13
2136	E26	3289	G16	5295 L26
2138	E27	3271	I 22	5301 E2
2139	F27	3272	H21	5401 Q10
2140	F25	3274	J22	5401 J6
2141	F26	3293	L23	5402 H5
2142	A25	3294	L24	5431 J8
2251	I 15	3295	L24	5435 J9
2258	G19	3301	E18	5436 J9
2261	J17	3302	E18	5510 G27
2262	K17	3304	F20	5512 I 23
2264	J19	3306	E19	5513 I 24
2266	G18	3307	E20	5519 I 28
2267	G17	3308	E21	5522 I 29
2268	G15	3309	F21	5523 J28
2269	G17	3404	H6	5524 J28
2270	H15	3410	G7	5541 K29
2272	I 21	3411	H12	5605 C23
2273	G20	3412	H12	5606 C4
2274	G20	3413	M12	5608 B3
2275	I 21	3414	M12	5631 A8
2291	J13	3415	K12	5632 A9
2292	J13	3416	M12	5637 A8
2294	L23	3417	K11	5681 B20
2295	M24	3420	I 8	5682 B20
2301	E19	3421	H9	5683 D20
2302	E18	3422	M7	6112 A27
2303	E2	3426	L7	6122 B27
2304	E19	3428	L6	6132 C27
2307	E20	3427	K7	6304 E18
2402	H5	3428	K6	6407 G8
2403	G6	3429	J6	6408 H8
2404	H6	3430	J6	6409 G7
2405	H8	3431	J6	6410 H7
2406	I 5	3432	I 9	6415 M12
2407	G8	3436	J9	6421 K8
2408	H8	3452	I 12	6425 L6
2409	G7	3460	L13	6426 L6
2410	H7	3470	K13	6427 K6
2412	H9	3509	I 22	6428 K7
2416	M11	3510	I 22	6429 J7
2417	M12	3511	I 23	6430 J7
2422	M8	3513	I 24	6431 J8
2423	M8	3514	J25	6432 J9
2424	L7	3515	I 28	6433 K9
2429	J7	3520	H13	6434 I 9
2431	K8	3522	I 29	6435 I 9
2432	K9	3523	I 30	6440 Q10
2433	I 9	3530	J30	6441 H10
2441	H10	3531	J30	6442 K10
2442	K10	3533	K31	6443 J10
2443	J10	3534	K31	6444 I 10
2444	I 10	3536	J30	6452 H11
2445	K11	3537	G31	6453 H12
2446	J11	3541	L29	6454 I 11
2447	I 11	3542	H31	6460 L13
2450	K12	3543	I 31	6470 J13
2451	H11	3544	H31	6510 I 23
2452	I 11	3545	H31	6513 I 24
2510	I 22	3546	H30	6514 J28
2511	J23	3550	L20	6515 J28
2512	J23	3551	L16	6517 J26
2514	I 25	3553	L20	6518 J26
2515	I 28	3554	L15	6540 L28
2517	I 26	3555	K15	6546 G25
2518	J28	3558	L20	6547 G25
2519	H28	3560	M18	6548 G25
2520	H26	3570	L18	6560 L18
2524	K28	3571	L19	6646 D17
2526	K29	3572	K20	6647 D18
2531	J31	3574	M21	6661 C18
2532	K30	3575	M18	6662 C18
2536	J30	3580	K21	6663 C19
2537	H31	3581	K22	6667 F14
2540	K28	3583	L22	6692 E22
2541	L30	3585	L21	7110 A26
2543	I 31	3586	L22	7120 B26
2544	H30	3603	C2	7130 D26
2547	H25	3604	D2	7270 J16
2554	M16	3605	C3	7295 L25
2555	L15	3606	C3	7304 E19
2556	M15	3607	A5	7306 E20
2560	L18	3608	A5	7401 L10
2561	L18	3609	A3	7417 L11
2563	L19	3611	E7	7421 K7
2571	M20	3612	F8	7432 J8
2573	L20	3614	A6	7450 J11
2575	M19	3615	A7	7452 H11
2601	F6	3616	C11	7470 K12
2602	F6	3617	D11	7510 I 23
2603	B5	3618	A9	7512 I 25
2604	C4	3619	A10	7526 J29
2605	E4	3620	D3	7530 K29
2606	E9	3621	D11	7560 K16
2607	D4	3622	D11	7580 L21
2608	A6	3625	C4	7585 L21
2609	B3	3626	E5	7600 D2
2610	B4	3627	E4	7610 B6
2611	B4	3628	E5	7640 A12
2612	E8	3629	E5	7671 B23
2613	F9	3641	B18	7680 C23
2614	A7	3642	C18	7687 D23
2616	C10	3643	C18	7695 F23
2617	D10	3644	D16	7696 E22
2618	B9	3645	D16	9306 L24
2629	A3	3646	D17	9374 D4
2640	A17	3647	D17	
2641	A16	3651	E12	
2642	A15	3652	F12	
2643	A15	3653	E12	
2644	A15	3654	E10	
2645	C17	3655	E16	
2646	C17	3656	E17	
2647	D14	3657	E17	
2648	F15	3658	E17	

PAL VERSION

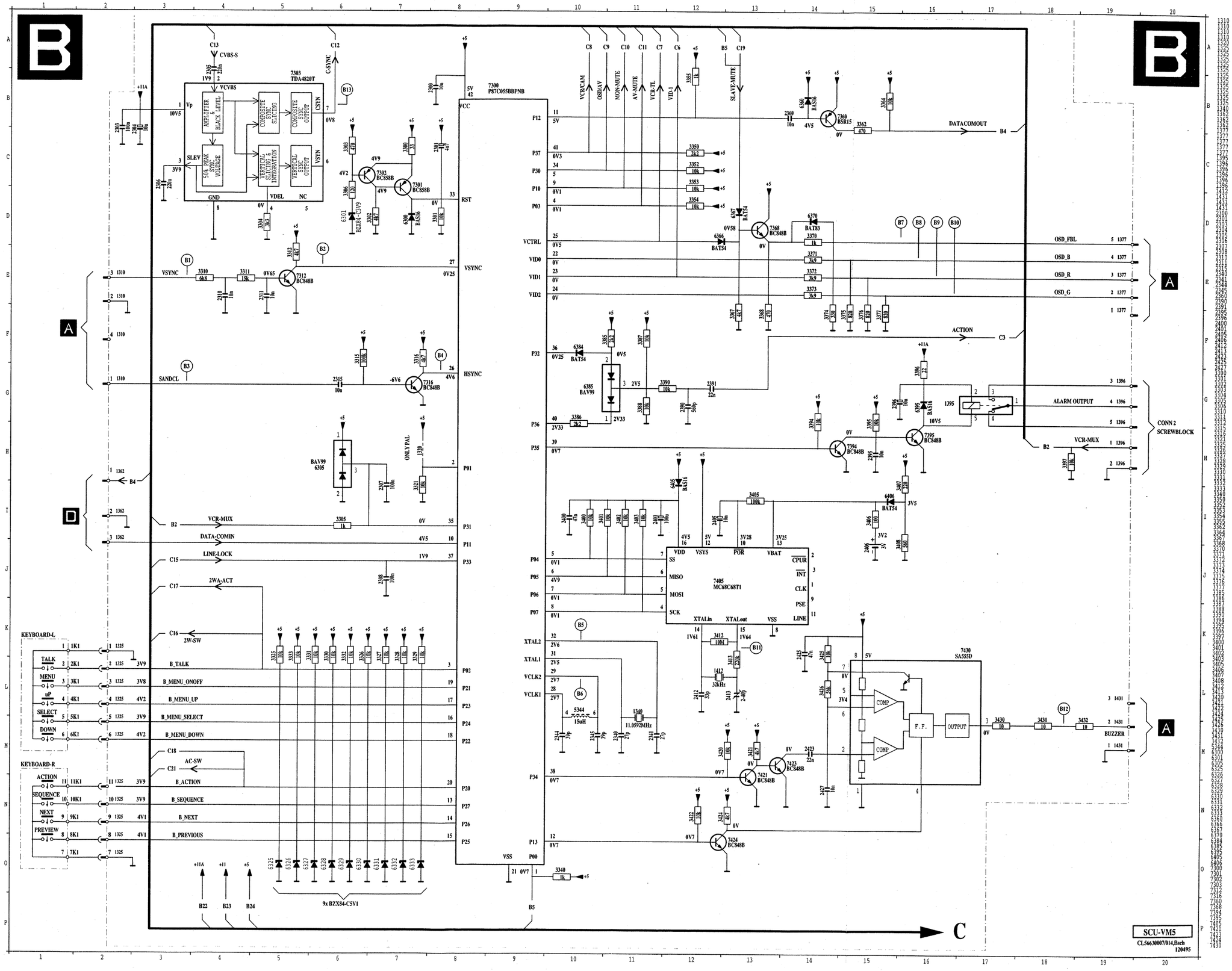
*) FOR NTSC VERSION SEE LIST BELOW

SUPPLY 220V PAL
SUPPLY 110V NTSC*

ITEM *)	VSS9451/00T PAL	VS9451ST NTSC *)
1401	T2A	T3A
1627	8.867MHz	7.159MHz
2402	1µ	47n
2403	2n2	4n7
2404	2n2	4n7
2405	47n	----
2406	47n	100n
2412	100µ	220µ
2422	1µ	470n
2429	220n	100n
2432	2n2	4n7
2603	1n	22n
2604	1µ	330n
2605	470n	22n
2607	100n	22n
2609	15p	39p
2610	12p	27p
2612	470n	330n
2614	10n	----
2618	220n	10n
2629	----	12p
3404	38Ω 265V	8Ω 145V
3410	4Ω7	2Ω2
3420	750k	47k
3421	750k	120k
3426	24	20Ω
3429	100Ω	68Ω
3430	100Ω	----
3431	100Ω	68Ω
3611	----	5k1
3612	4k7	10k
3614	1k2	----
3615	390Ω	----
3618	180Ω	----
3619	470Ω	----
3625	----	270k
3626	----	82k
3627	----	10k
3628	----	15k
3629	----	10k
5401	220V	110V
5605	4.43MHz	3.58MHz
5631	DL701	----
5632	2.52MHz	----
5637	6Ω8	----
7432	BUT11AF	2SC3832
7610	TDA4510/V2	TDA4570

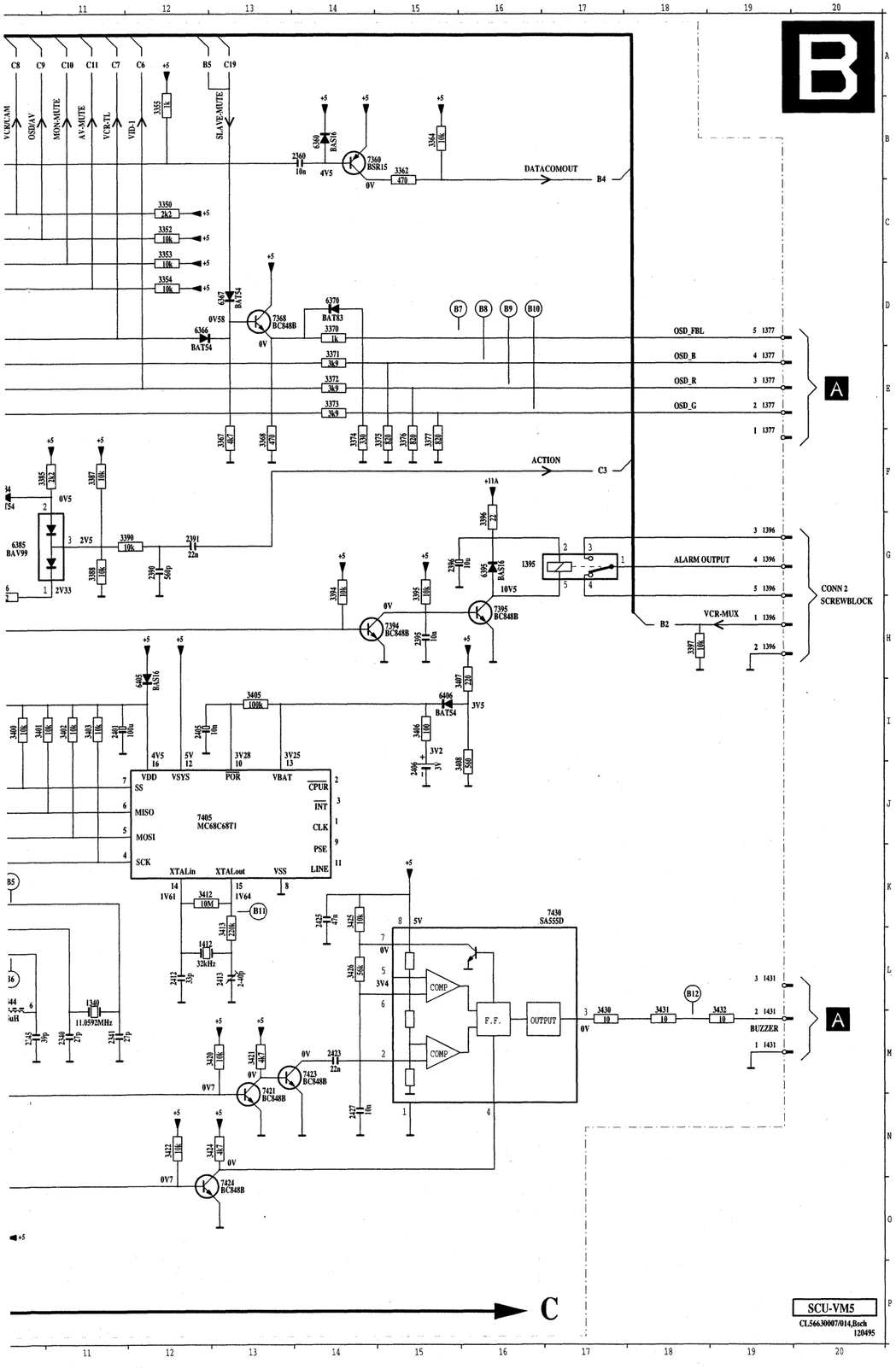
System control unit

VSS8250

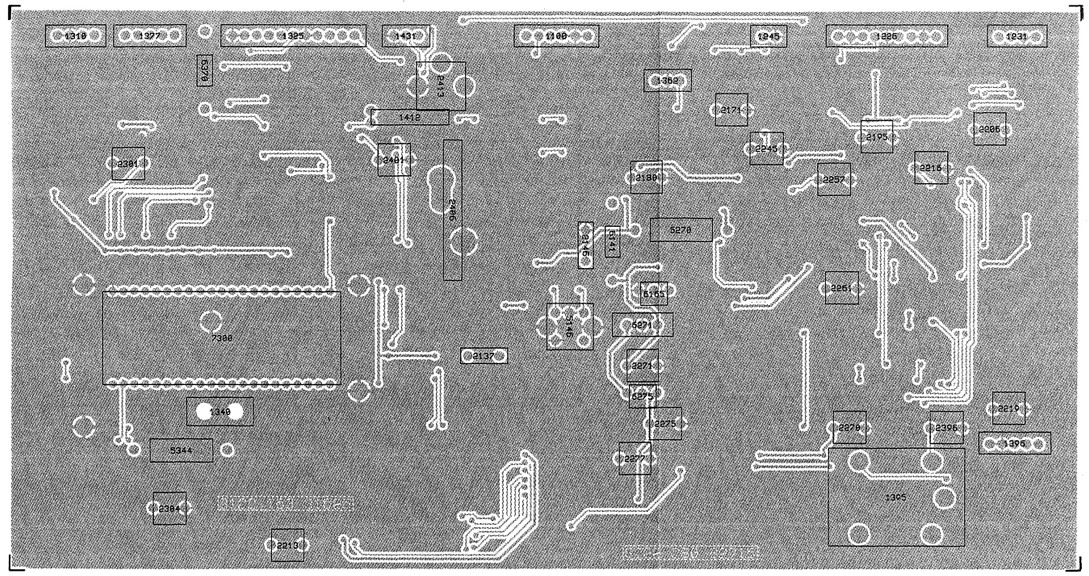


PCS 81 032

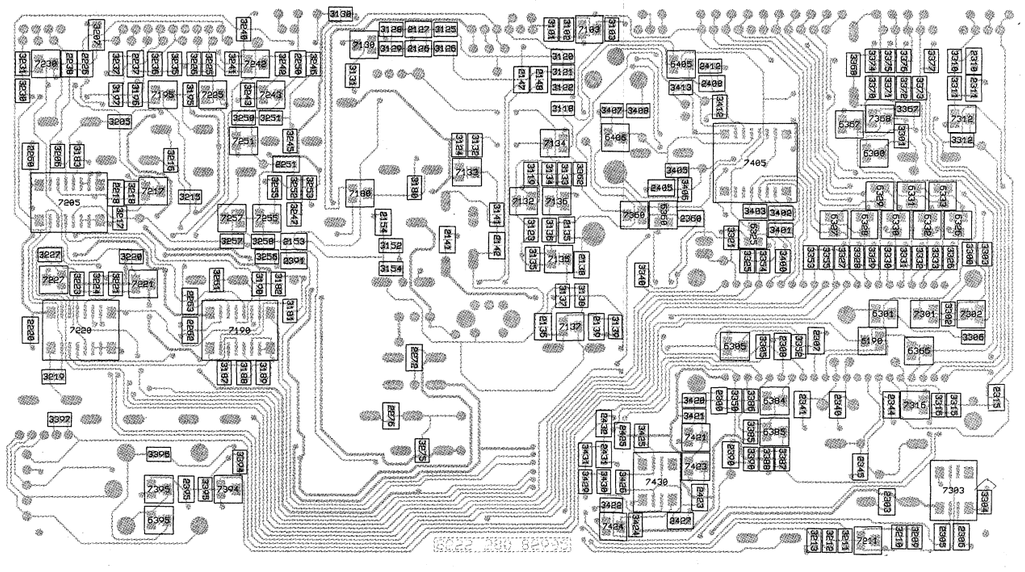
System control unit



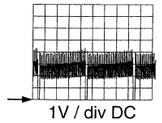
Component side

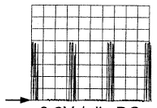


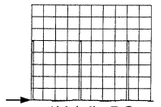
Solder side



System control unit wave forms

B01

1V / div DC
5ms / div

B07

0.2V / div DC
20µs / div

B02

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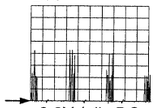
20µs / div

B08

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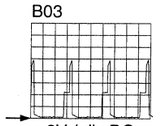
20µs / div

B03

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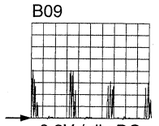
20µs / div

B09

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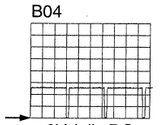
20µs / div

B04

2V / div DC
20µs / div

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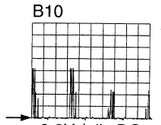
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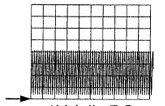
20µs / div

B05

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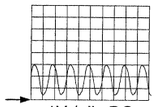
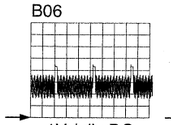
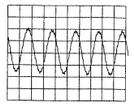
0.5µs / div

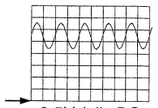
B11

1V / div DC
20µs / div

B06

1V / div DC
20µs / div

B12

1V / div DC
0.5mS / div

C01

0.5V / div DC
5ms / div

C02

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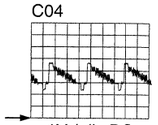
0.5ms / div

C04

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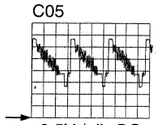
20µs / div

C05

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20µs / div

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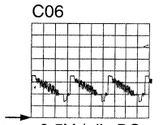
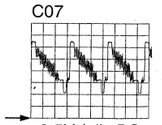
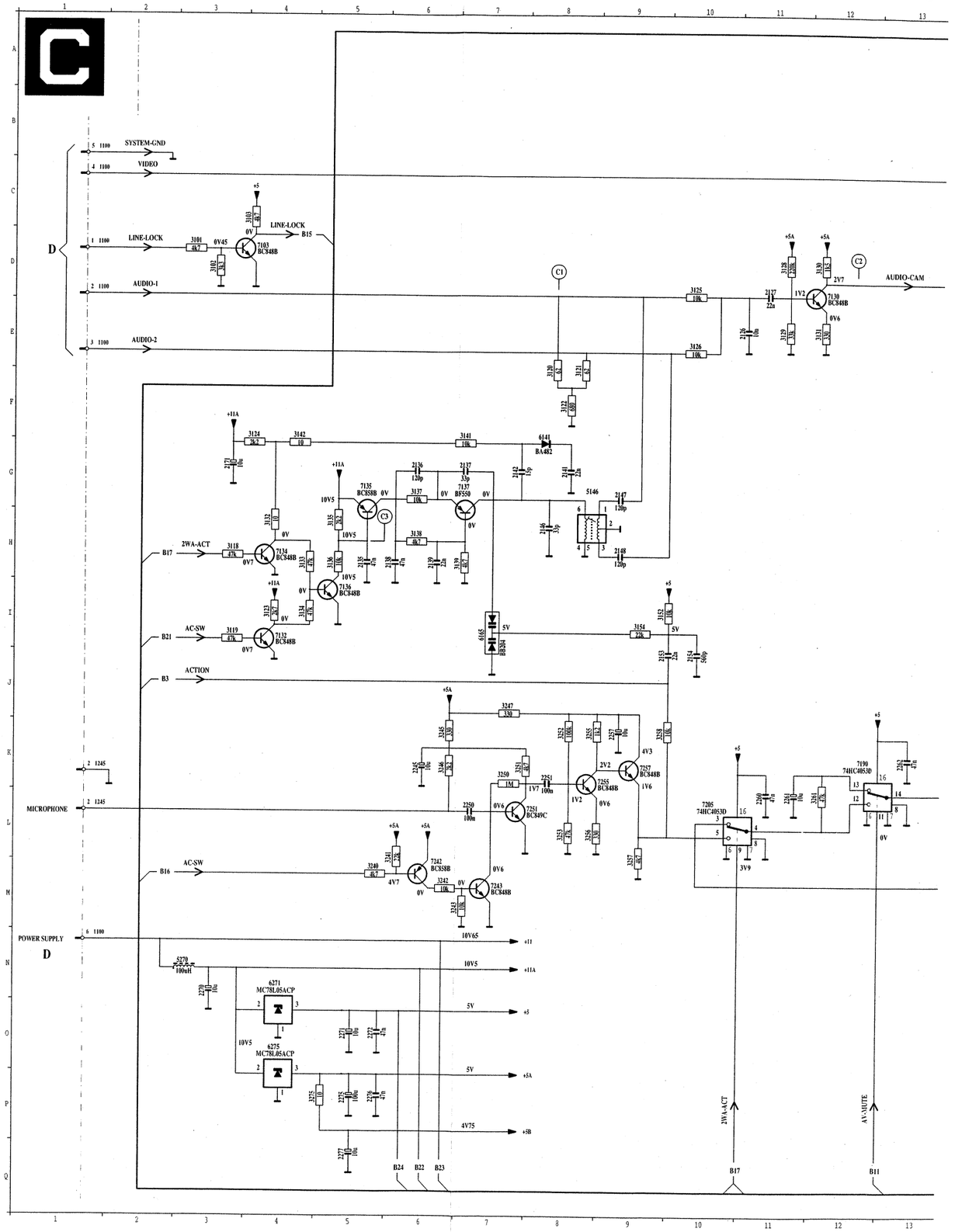

0.5V / div DC
20µs / div

C07

0.5V / div DC
20µs / div

→ = 0V

Sys



System control unit

C01
0.5V / div DC
5ms / div

C02
0.5V / div DC
0.5ms / div

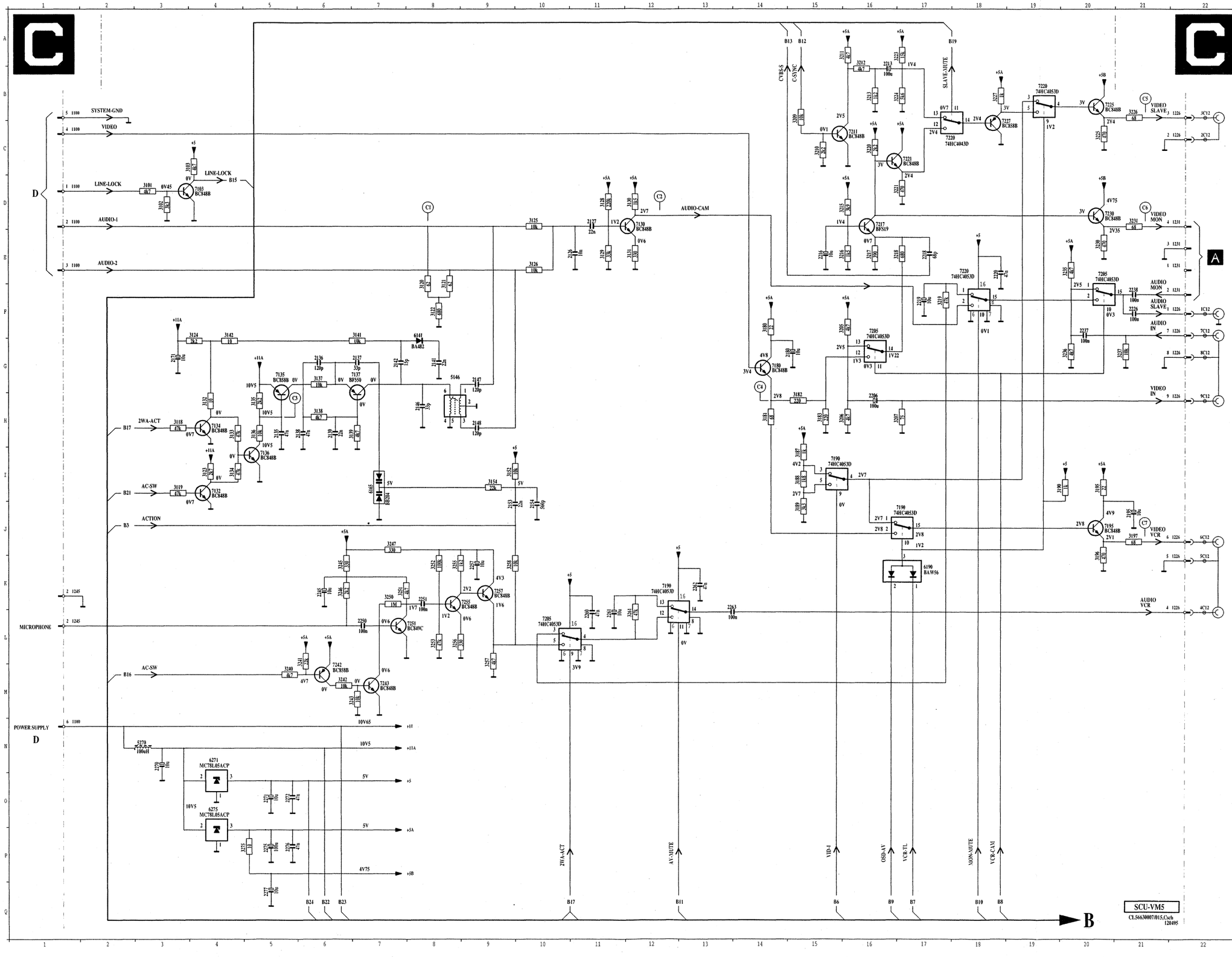
C04
1V / div DC
20µs / div

C05
0.5V / div DC
20µs / div

C06
0.5V / div DC
20µs / div

C07
0.5V / div DC
20µs / div

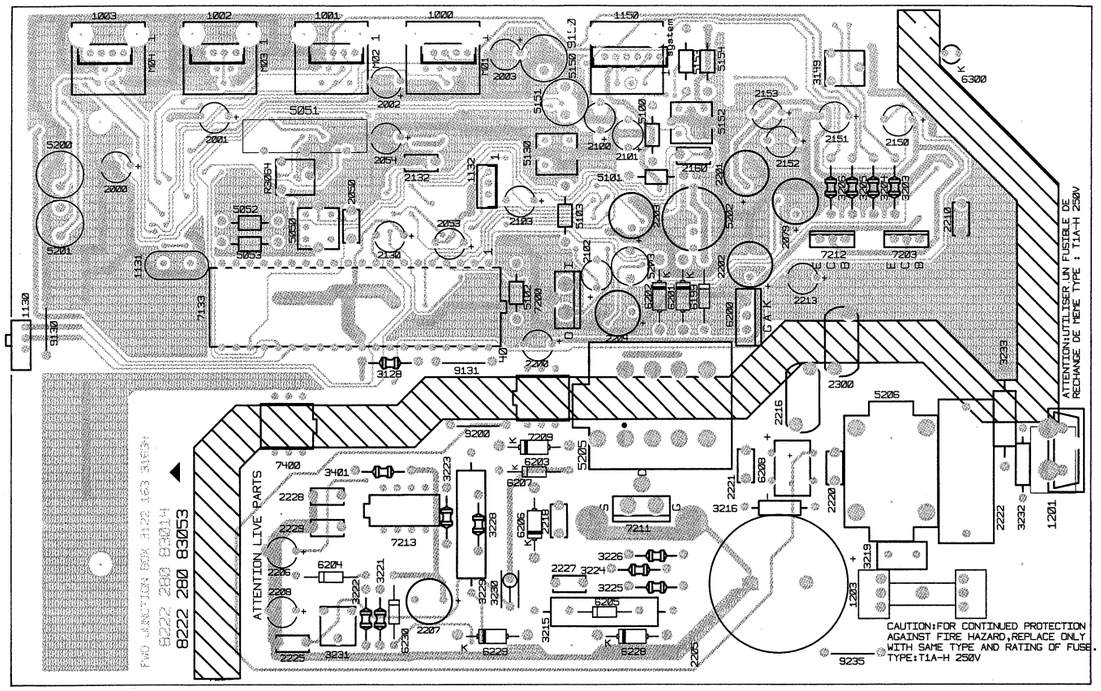
→ = 0V



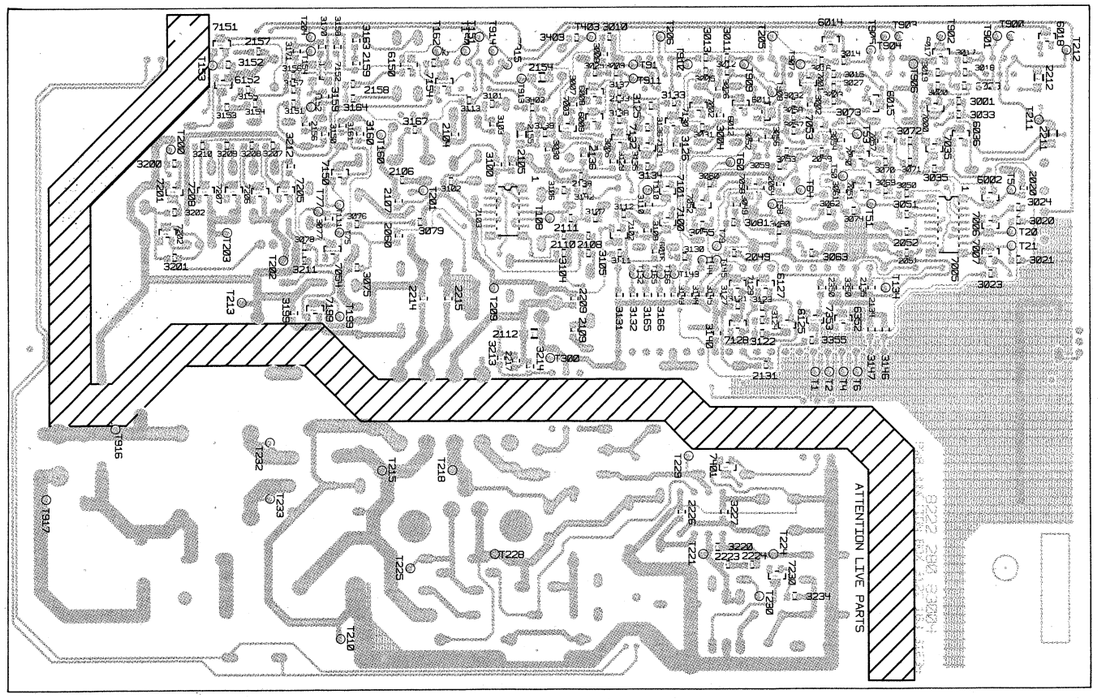
PCS 81 033

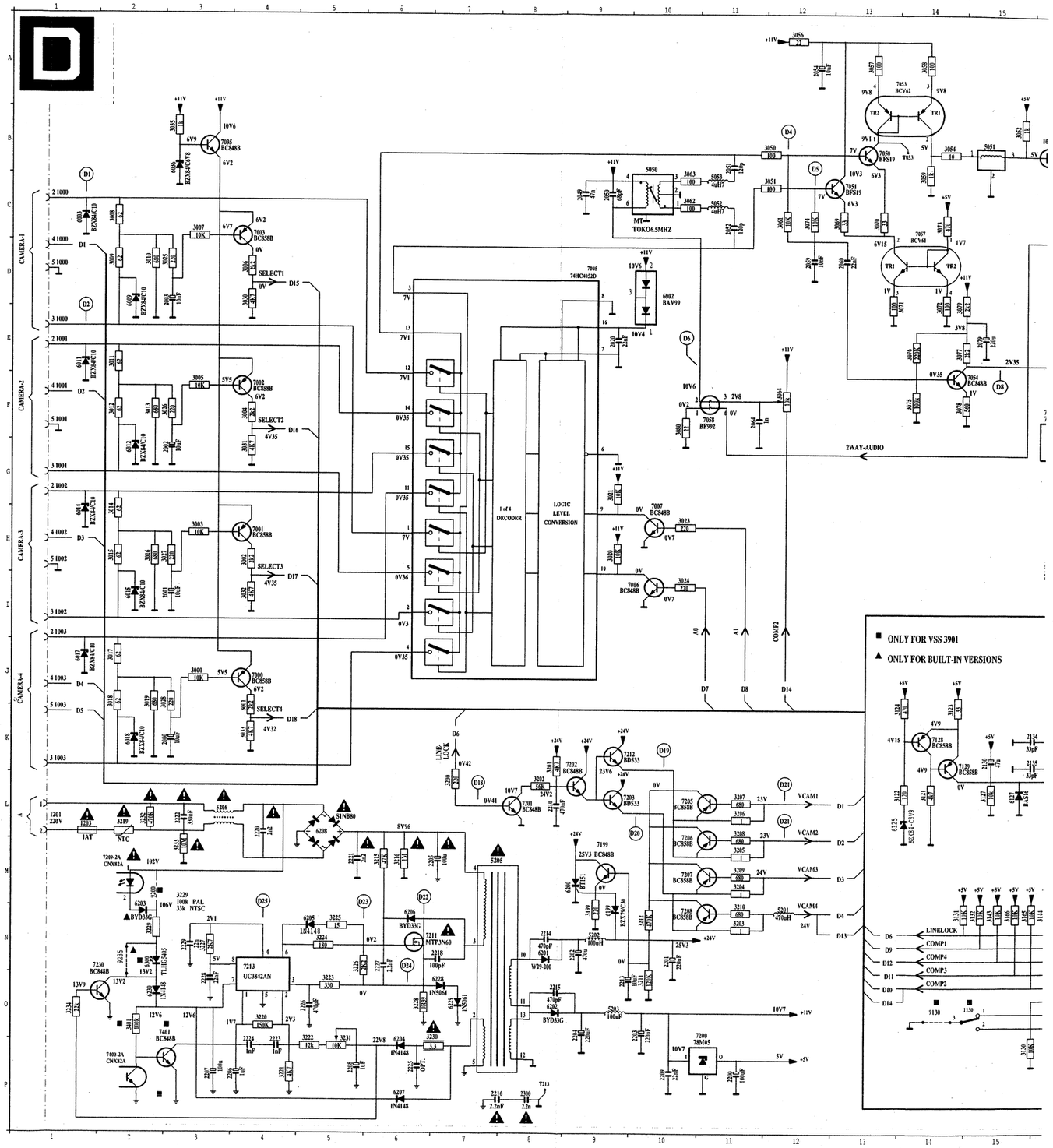
Junction box

Component side


ATTENTION LIVE PARTS
CAUTION:FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,REPLACE ONLY WITH SAME TYPE AND RATING OF FUSE. TYPE:T1A-H 250V
ATTENTION:UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE : T1A-H 250V
FWD JUNCTION BOX 91.22 163 33693
8222 280 83053
8222 280 830114

Solder side





Junction box

ATTENTION:UTILISER UN FUSIBLE DE RECHANGE DE MEME TYPE : T1A-H 250V

ECTION
F ONLY
OF FUSE.

■ ONLY FOR VSS 3901

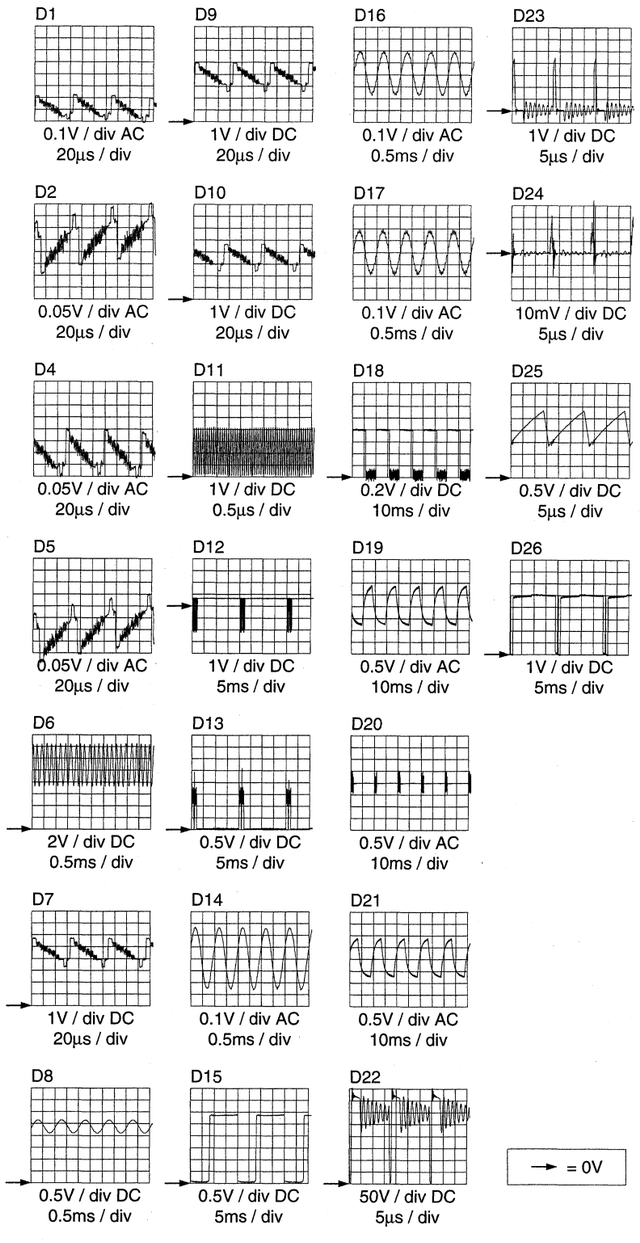
▲ ONLY FOR BUILT-IN VERSIONS

JB-VM5

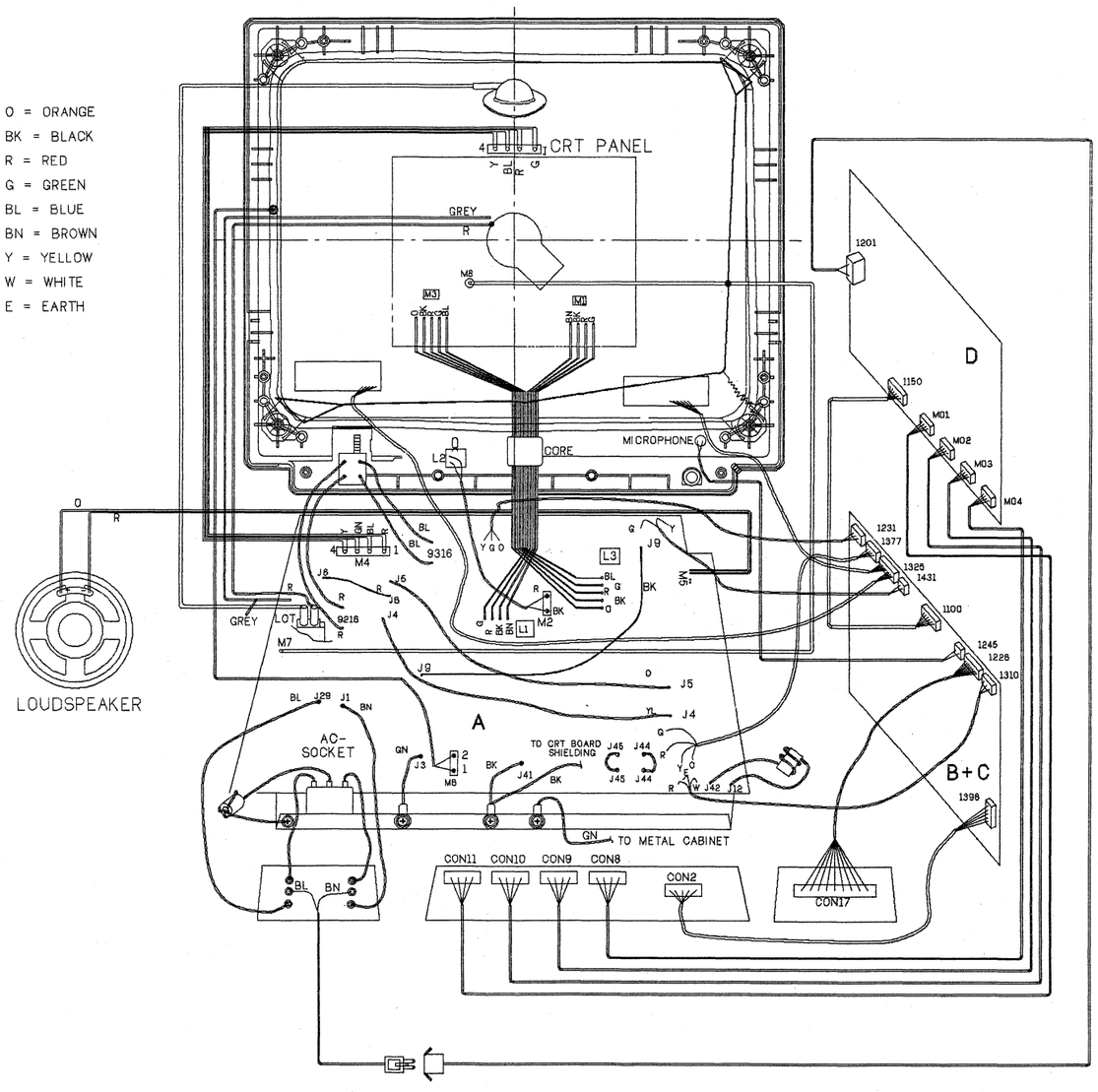
CL5663U0007/016,Dach

120495

Junction box wave forms



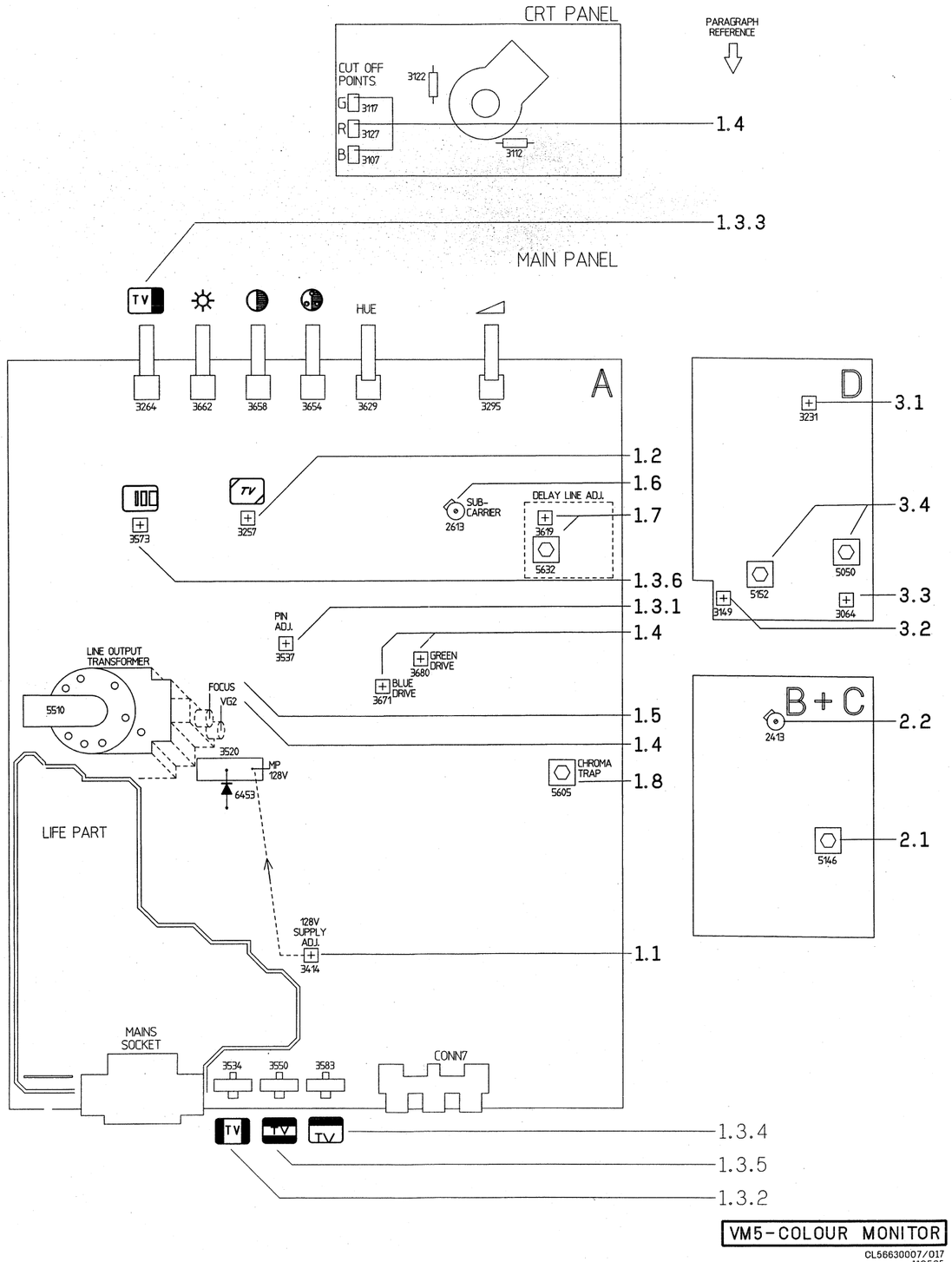
11. Wiring diagram



VM5 COLOUR MONITOR

CL46620023/013
101094

12. Adjustments locations



13. Electrical adjustments

1. Adjustments on the main panel

1.1 +128V supply voltage (3414)

- Apply a signal to the video input with color bar pattern.
- Set volume control 3295, brightness front control 3662 and contrast front control 3658 to minimum.
- Set trimming potentiometer 3414 in mid-position. (This is a pre-setting).
- Connect DC voltmeter to junction of resistor 3520 and diode 6453.
- Switch on monitor.
- With trimming potentiometer 3414 set the DC voltage at junction 3520/6453 to 128V.

1.2 Horizontal synchronization (3257)

- Apply a video signal with cross hatch pattern to the monitor.
- Set brightness front control 3662 and contrast front control 3658 at centre click position.
- Turn off the monitor.
- Short capacitor 2270. (This capacitor is connected to pin 5 of IC 7270. Using a lead wire to connect pin 5 of IC 7270 to ground directly.)
- Turn on the monitor.
- With trimming potentiometer 3257, adjust the picture so that it is straight.
- Turn off the monitor.
- Then remove the short-circuit on 2270.

1.3 Adjustment of the picture geometry

- Apply a video signal with cross hatch pattern to the monitor.
- Set brightness front control 3662 and contrast front control 3658 to click-position.

1.3.1 East-west correction (3537)
- With potentiometer 3537, make the vertical lines on the left and right-hand side of the screen as straight as possible.

1.3.2 Picture width (3534)
- With potentiometer 3534, set the picture width for 14 blocks to 260 mm.

1.3.3 Horizontal picture cantering (3264)
- With potentiometer 3264, set the correct horizontal cantering.

1.3.4 Vertical picture cantering (3583)
- With potentiometer 3583, set the correct vertical picture cantering.

1.3.5 Picture height (3550)
- With potentiometer 3550, set the picture height for 10 blocks to 186 mm.

1.3.6 Vertical linearity (3573)
- Adjust the correct vertical linearity with Pre-set potentiometer 3573. If necessary repeat 1.3.5 and 1.3.6.

1.4 Adjustment of cut-off points / White "D"

- VG2 (bottom knob on the line output transformer)
- cut-off points of the picture tube (3107, 3117 and 3127)
- white "D" (3671,3680)

- Apply a video signal with white pattern to the monitor.
- Set brightness front control 3662 to centre click position and contrast front control 3658 to minimum.
- Set the potentiometers 3107,3117,3127,3671 and 3680 in mechanical mid-position.
- Set VG2 potentiometer to minimum.
- Set the signal generator in "purity" position and introduce the respective colours red, green, and blue.
- using potentiometers 3127(R), 3117(G), 3107(B) with the corresponding colour pattern, set the voltage on the picture tube pins 8, 6 and 11 to 100 V.
- Apply a white frame and adjust the VG2 potentiometer so that any colour among red, green or blue becomes visible.
- Set the pattern generator to purity with the colour that was visible.
- Reset VG2 potentiometer to just visible light.
- Adjust the two remaining colours with their corresponding purity colour to the same light output using potentiometers 3107, 3117 or 3127.
- Return the signal generator to white frame and adjust the potentiometers 3107, 3117 and 3127 so that an optimum background colour is obtained.
- Using potentiometers 3671 and 3680 (with white frame) adjust the background colour so that at minimum brightness and maximum brightness the background colour is the same.

1.5 Focus setting (top knob on the line output transformer)

- Apply a CVBS signal with Cross-Hatch pattern to the monitor.
- Set brightness front control 3662 to background just invisible and contrast front control 3658 to maximum.
- Adjust focusing so that the picture at 2/3 of the diagonal lines (counting from centre to four corners) of the displayed screen is as sharp as possible.

1.6 Sub-carrier oscillator (2613)

1.6.1 For PAL versions;
- Apply a signal with colour bar pattern to the monitor.
- Connect 470 ohm resistor between pin 11 of IC 7610 and earth.
- Adjust 2613 so that the colour picture on the screen is stationary.
- Remove the 470 ohm resistor.

1.6.2 For NTSC versions
- Apply a signal with Color Bar Pattern.
- Set the controls to the nominal setting.
- Interconnect pin 11 and pin 3 of IC 7610 by 470 ohms.
- Adjust 2613 in such manner that the color on the screen has practically come to a standstill. Remove the connection.

1.7 PAL delay line (3619, 5632) Only for PAL versions

- Apply DEM pattern from a pattern generator to the monitor.
- Set brightness front control 3662 at click-position and contrast front control 3658 to maximum and colour saturation control 3654 to 3/4 of the range.
- Adjust 3619 so that the "venetian blinds" in the third bar disappear.
- Then adjust 5632 until the "venetian blinds" in the first and fourth bar disappear.
- Readjust 3619 as described above.

Electrical adjustments

1.8 Adjustment luminance and chrominance (5605) Only for NTSC versions.

- Apply colour bar pattern to the monitor.
- Connect oscilloscope to pin 15 of IC 7640.
- Set 5605 so that the chrominance signal is minimum. (The chrominance signal is superimposed on the grey steps of the luminance signal).

2. Adjustments on the system control unit

2.1 Two audio carrier

- Activate the two way audio button on the monitor.
- Adjust by means of 5146 the hf signal on pin 2 of connector 1100 to 6200 kHz ± 2 kHz.

2.2 Clock signal

- Connect a frequency counter to pin 15 of 7405. Adjust 2413 for a frequency of 32768 Hz ± 0.1 Hz

3. Adjustments on the junction box

3.1 +24V supply

- Connect a DC voltmeter to node 5205/2201.
- Adjust 3231 at +24V DC.

3.2 System DC level

- Connect voltmeter to pin 2 of connector 1150.
- Adjust the DC volage with 3149 to 6.0V ± 0.1V.

3.3 Action circuitry

Connect multimeter to node 2064/3064.
Adjust the voltage with 3064 to 500mV ± 100mV.

3.4 Two way audio

- Connect a spectrum-analyzer (probe: Ri > 10MΩ, Ci < 2pF; Sweep: 6 - 7 MHz) on node 3063/5053.
- 1st adjust 5152 for equal and maximum amplitude.
- Next adjust 5050 for equal and maximum amplitude.

14. Directions for use

Fitting a mains plug (U.K. only)

This apparatus is fitted with an approved moulded 13 Amp plug. To change a fuse in this type of plug proceed as follows:
1. Remove fuse cover and fuse.
2. Insert new fuse, which should be a BS1362 5A, A.S.T.A. or BSI-approved type.
3. Refit the fuse cover.

If the fitted plug is not suitable for your socket outlets, it should be cut off and an appropriate plug fitted in its place. If the mains plug contains a fuse, this should have a value of 5A. If a plug without a fuse is used, the fuse at the distribution board should not be greater than 5A.

HOW TO CONNECT A MAINS PLUG

The wires in the mains lead are coloured in accordance with the following code:
BLUE – "NEUTRAL" ("N"); BROWN – "LIVE" ("L"); GREEN & YELLOW – "EARTH" ("E")

1. The GREEN AND YELLOW wire must be connected to the terminal in the plug which is marked by the letter "E" or by the safety earth symbol "E" or coloured GREEN or GREEN AND YELLOW.

2. The BLUE wire must be connected to the terminal which is marked with the letter "N" or coloured BLACK.

3. The BROWN wire must be connected to the terminal which is marked with the letter "L" or coloured RED.

Before replacing the plug cover, make certain that the cord grip is clamped over the sheath of the lead – not simply over the three wires.

VIDEO/AUDIO INPUT

Be sure to disconnect the mains lead from the mains socket before connecting the other equipment.

Operation ⚠

Monitor

Stand-by: By pushing the **stand by** button (fig. A-1) the image and sound on the monitor can be switched on and off.

Brightness/contrast: With the **brightness** and **contrast** button (fig. A-2) the picture can be adjusted to your personal preference or to the ambient conditions.

Hue/Saturation: Using the **hue** and **saturation** adjustment you can adjust the colour to your own personal preference or surrounding conditions (fig. A-2).

Shift: Using the **shift** adjustment (fig. A-2) you can locate the picture in the middle of the monitor with the aid of a screwdriver.

Volume: With the **volume** button the sound level can be adjusted (fig. A-3).

Talk: This button is only functional in combination with an intercom box (optional).

By pushing the **talk** button (fig. A-11) the built-in microphone (fig. A-12) in the monitor is switched on.
The sound from the microphone can be reproduced by means of the intercom box.

Action: This button is only functional in combination with an action box.

By means of the **action** button (fig. A-4) it is possible to activate an action box. This can, for instance, be used to open a door remotely.
The **action** box remains active for as long as the button is pressed.

Auto Sequence: If you have extended the system with several cameras, you can have the pictures switch automatically and continually from one camera to another at preset interval times.

The interval time and the switching sequence should be programmed in the system menu. By pressing the ⏭ - key (fig. A-5) the automatic switching function is started and the symbol ⏭ appears at the top left of the screen. In case no sequence has been programmed the text **EMPTY** will appear on the screen.

By pressing the ⏭ - key again the automatic switching function is switched off.

Alarm priority:
A new alarm always gets priority. The monitor will always switch to the camera of the last-received alarm but the camera number of each previously received alarm blinking.

Intercom box (Optional)

When the **talk** button is pressed, the sound from the monitor's microphone is reproduced by the intercom box (fig. E), which can be installed in the area monitored by the camera.

In the same way the sound from the intercom box microphone (fig. E-1) (plus that from the camera, if not switched off) is reproduced by the monitor. This is a particularly practical function when the system is used frequently for access surveillance.

Doorbell: The pushbutton (fig. E-2) on the intercom box can be used as a doorbell. When the button is pushed, a buzzer will sound at the monitor, after which the picture will be switched to the corresponding camera.
If the automatic camera sequence is active, it will be stopped. If the system operator does not react within 1 minute to the warning signal by pushing any button, the monitor will return to its previous status, or the automatic camera sequence will continued.

Action box (Optional)

With an action box it is possible to open a door remotely.
By pressing the **action** key (fig. A-4) on the monitor, the make and break contact in the action box (incorporated in the line of the camera that is active at that moment) is activated. If the automatic camera sequence is active, it will be stopped at the camera input in question.

Alarm box (Optional)

Different kinds of detectors, with make and break contacts (fig. F) according to preference, can be connected to the alarm input of an alarm box, such as infrared detectors or magnetic contacts. When an alarm is detected, the alarm contact in the monitor is activated (fig. B-4).

Directions for use

Junction box (Optional)

Through the use of 1 or 2 junction boxes (optional) your observation system can be supplemented by a maximum of 7 or 10 cameras respectively (fig. K).

The total length of the cable between the camera and the monitor (incl.junction boxes) may not be any longer than 300 metres for colour and 400 metres for B&W systems.

Place the junction box in the vicinity of a power supply socket.

System menu

The system menu offers the possibility to adjust various functions (Camera and VCR images, Multiplex recordings and Alarm). By pressing the **menu** key (fig. A-10) the main menu will appear on the screen.

Figure M1 provides an overview of the menu structure. For a description of this see further in this manual.

In case you require the menus in a language other than the English pre-programmed in the factory it is possible to change them. Please refer to the chapter "System menu", "Language menu" for this purpose.

Program keys

The following keys are used for programming:

Menu: By pressing the **menu** key (fig. A-10) the main menu (fig. M2) is opened. If the **lock** function has been activated the text "**System locked**" will appear on the screen and the menu can only be opened if the "**Password**" is entered within 1 minute.

During programming the menu can be exited by pressing the **menu** key (except in the camera menu and the password menu). Modified settings will be saved on exiting the menu.

▲ : (fig A-8) With this key you can move to the item located above or to the left in the menu. In the entry fields this key is used to increase the value contained in that field.

▼ : (fig A-9) With this key you can move to the item located below or to the right in the menu. In the entry fields this key is used to decrease the value contained in that field.

Select: (fig. A-7) With this key the applicable menu item is selected. In the input fields this key is used to enter the input values.

Entry fields

These fields can only be entered after they have been selected with the **select** key. The background colour changes and will begin to flash. By using the ▲ - and ▼ - keys the value in the selected input field can be increased or decreased. By pressing **select** once again the value chosen is stored.

Main menu

A setting can be modified by selecting the corresponding item from the main menu (fig. M2).

MODE:
SEQUENCE:
SEQUENCE TIME:
ALARM:
INSTALL

The new values can be entered into the relevant input fields.

Reset: If the ▲ - and ▼ - keys are pressed simultaneously for at least 1 second (fig. A-8/9) the system will be reset and all system settings will be returned to their standard default values. The system adjustments (camera numbers, language, time/date, etc.) will have to be reinstalled following a reset. Following a reset the install menu will appear on the screen automatically.

Mode menu
You can adjust 3 functions using mode:
- Camera sound and picture reproduction
- VCR reproduction (VCR input)
- Multiplexing: This is the rapid sequential switching of the various cameras. These images can be recorded on a VCR connected to the VCR output.

Select **mode** from the main menu. The image shown in fig. M3 will be displayed on the monitor.

A choice can be made from:
- **cameras**: in the camera mode the cameras are shown on the screen.
- **VCR replay**: With this option you can switch the monitor into the replay mode. The text **VCR** will appear in the middle of the screen. The signal present at the VCR input on the rear of the monitor (fig. B-2) will be displayed.
- **VCR multiplex**: The multiplex mode is a fixed rapid switching interval entered through the VCR or generated by the monitor. The video signal generated in this manner is not suitable for direct observation.
  The signal is only present at the VCR output.

The external VCR switching signal can be made available at the rear of the monitor (fig. B-5). This is usually generated by a time lapse recorder. The switching sequence is determined in accordance with the programming explained in the chapter "SEQUENCE MENU".

When the system is in the VCR multiplex mode the symbol **MX** is displayed. The background colour on the screen becomes one colour, through which the user is unable to see the rapid switching of the cameras. The screen on any additional monitor connected will be blank. There is no sound reproduction in this mode.

To view a video tape that has been recorded in the multiplex mode the system has to be switched to the VCR play mode and the tape viewed via the still picture mode or a demultiplexer.

Sequence menu

This is used to program the switching sequence of the automatic switching function. Select **sequence** from the main menu. The image shown in fig. M4 will appear on the monitor. The applicable sequence will be displayed at the bottom of the monitor screen. A new sequence is programmed by selecting cameras from the series of cameras connected. The camera number is then included in the sequence displayed at the bottom of the screen. A sequence may contain a maximum of 10 cameras. A camera may be selected more than once in a sequence.

Sequence time menu

This is used to program the interval time of the automatic switching function (the time interval between the following cameras in the sequence).

Select **sequence time** in the main menu. The image shown in fig. M5 will be displayed on the monitor.
Select the required interval time. This will then be displayed in the menu.

Alarm menu

Select **alarm** in the main menu. The image shown in fig. M6 will be displayed on the monitor.

A choice can be made from:
- **alarm**: The alarm function can be switched on or off for each camera line. Once this has been switched on the alarm abbreviation **AL** will appear on the right of the screen.
- **alarm output**: If required the alarm can be transmitted externally during a programmable period.
- **alarm buzzer**: The alarm buzzer can be switched off, or switched on to operate for 15 seconds or continuously.

Alarm: Select **alarm** in the alarm menu. The image shown in fig. M7 will be displayed on the monitor.
Select the required camera line using ▲ - and ▼ - keys and press select to switch the alarm on or off for the line selected. Repeat this for the other camera lines.

Once all the values have been entered they can be stored by pressing **store**. You will then be returned to the alarm menu. The cameras in the off status are now displayed in the alarm menu.

Alarm output: Select **alarm output** in the alarm menu. The image shown in fig. M8 will be displayed on the monitor.

A choice can be made from:
- **off**: The relay will not be activated on an alarm.
- **30 sec. or 3 min**: The relay will be deactivated following the elapsed time.
- **continuous**: The relay will only be deactivated after a random key has been pressed on the monitor.

Select the option required.

Alarm buzzer adjustment: Select **alarm buzzer** in the main menu. The image shown in fig. M9 will be displayed on the monitor.
A choice can be made from:
- **off**: The buzzer will not sound on an alarm.
- **15 sec.**: The buzzer will sound for 15 seconds.
- **continuous**: The buzzer will only be deactivated after a random key has been pressed on the monitor.

Select the option required.

Last alarm event

The time and date of the last alarm are displayed in the **mode** menu screen (fig. M3). Select **mode** in the main menu for this purpose.

Lock menu

The operation of the keys on the monitor can be locked by means of a password. If a random key is pressed when the system is locked the text **SYSTEM LOCKED** (in the selected language) will appear on the screen.

Password: By entering the password the system can be unlocked. After the text "**SYSTEM LOCKED**" has appeared on the screen press the menu key (fig. A-9). The text "**password**" will then appear on the screen in the language selected.

The password consisting of 1 to 4 characters has to be entered in the input fields one character at a time. The characters are displayed in the input field so that the user can see what has been entered. The **LOCK** option can only be deactivated through the installation menu (fig. M10).

Activating Lock: Select **install** in the main menu. The image shown in fig. M11 will be displayed on the monitor.

A choice can be made from:
- **off**: The system lock is deactivated.
- **on**: if the option **on** is selected the system will immediately exit the menu and the message **SYSTEM LOCKED** will be displayed on the screen in the language selected for 3 seconds.
- **change password**: if the option **CHANGE PASSWORD** is selected the password can be changed in the menu (fig M12) By means of the ▼ - and ▲ - keys the values in the required field can be increased or decreased.

  A password may consist of a maximum of 4 characters.

  Once all the characters have been entered you can store them by pressing the **store** key. You will then be returned to the install menu. By pressing **Cancel** the characters will not be stored and input terminated.

Temporary overriding Lock: If the camera selection keys ◀ and ▶ (fig. A-6) are pressed simultaneously

for at least 1 second when switching on the mains power supply the "system lock" will be temporarily overridden. The monitor will then directly enter the camera mode. This function only has to be used if "**System lock**" is "**on**" and the password has been forgotten.

Time/Date menu

With this menu the time, date and the display position can be set.

Select install in the main menu and **set time/date** in the install menu. The image shown in fig. M13 will be displayed on the monitor. By means of the ▲ - and ▼ - keys the values in the required field can be increased or decreased.

A choice can be made from:
- **display**: Determines the position; **Left bottom, Right bottom, off** of the time/date at the bottom of the screen, (fig. M14).
- **time**: HH, MM and SS (hours, minutes, seconds), (fig. M15).
- **date**: YY, MM and DD (years, months, days), (fig M16).

Remarks: The date format is automatically determined by the language selected. For English the format is YY-MM-DD; for all other languages the format is DD-MM-YY.

Once all values have been entered they can be stored by means of the **store** key.

Language menu

With the aid of this menu the language used for the menus can be selected.

Select **install** in the main menu and **language** in the install menu. The image shown in fig. M17 will be displayed on the monitor. Using the ▲ - and ▼ - keys select the required language and press the **select** key. All menus will now appear in the language selected.

Directions for use

Camera menu

Cameras (and accessories) are installed by:
- selecting the cable length between the monitor and junction box(es);
- providing a unique camera identification number for each camera;
- adjusting the picture quality for each camera line.

On installation or modification of the camera configuration newly connected cameras do not have an identification number and are identified on the screen by **CAM**. They can however be selected with the aid of the ◀ - and ▶ - keys, but cannot be programmed into an automatic switching function.

Select **install** in the main menu and **install cameras** in the install menu. The image shown in fig. M18 and M19 will be displayed on the monitor. Select the cable length between the monitor and any junction box(es) present.
The image shown in fig. M18 and M19 will be only displayed if there are 1 or 2 junction boxen installed.

Following this the camera for the camera number concerned should be selected. The first free camera number is displayed in the menu (fig. M20).

The user then selects a camera image for the corresponding camera number by means of the ◀ - and ▶ - keys. By pressing **select** the following screen appears (fig. M21), on which the cable length compensation to the camera has to be selected. When the ▲ - and ▼ - keys are used to go through the cable length compensation steps the user can immediately see any changes in picture quality on the screen.

Changing a camera number is only possible via the **"clear all"** function. All camera numbers and cable length will then have to be reprogrammed.

Installation

Warning:
When a camera or accessory is added to or removed from the sytem, the monitor should always be disconnected from the mains supply. Operating the **stand by** key alone is not sufficient !

Intercom box (Optional)

Incorporate the box in the desired camera line by means of the supplied cable, see figure E.

Alarm box (Optional)

Incorporate the box in the desired camera line by means of the supplied cable, see figure F.

Alarm detectors with a make and/or break contact can be connected to the alarm input. Connect the detectors to the three-pole screw block.

Remark: When detectors with only a make contact are connected, points 1 and 2 should always remain connected by means of a wire.

Action box (Optional)

Incorporate the box in the desired camera line by means of the supplied cable, see figure G.

The output of the action box consists of a make and break contact. This contact can be used for, for instance, operating a 'door opener'. Connect this to the three-pole screw block.

Cable extension adapter (Optional)

A cable extension adapter can be used to extend the system cable by another 200 metres (or 150 metres for colour) and to see to the necessary cable compensation. The box is provided as standard with a separate mains voltage adapter of +24V.

In order to optimize the quality of the picture, the rotary switch (fig. F-1) at the bottom of the box should be set by means of a coin. This rotary switch with 9 positions should be set to the **total** cable length between camera and monitor, see table. If necessary, you should temporarily use an intercom box to adjust the optimum picture as seen by the operator.

Table:

Position	Total length between camera and monitor
0	up to 100 m
1	up to 200 m
2	up to 300 m
3	up to 400 m
4	not connected
5	not connected
6	not connected
7	not connected
8	not connected
9	not connected

Connect the box in the desired camera line by means of the supplied cable (see figure F-3). Connect the mains supply adapter to the box (fig. F-2) and to the mains supply.

Camera interface box (Optional)

If existing cameras in the system, which are equipped with a CVBS (BNC plug) or RF (TV plug) for coax cable, have to be connected, this can be done by using an interface box.

The interface box is used as transition from the coax cable to the system cable and as adapted power supply for RF cameras with TV channel 3 and 4 setting.

Connect the camera with the CVBS (BNC plug) or RF (TV plug) to the corresponding input (fig. G-1) of the camera interface box. Select the input in question on the box by means of the switch (fig. G-2).

Connect the system cable to the output of the camera interface box.

Note: The length of the cable between camera and interface box should not exceed 10 metres.

Junction box (Optional)

Connect the system cable to the output on the junction box and input 4 (fig. K-1) on the monitor.

A maximum of 4 cameras can be connected to one junction box. When using 2 junction boxes always connect the output from the 2nd junction box to camera input 4 (fig. K-2) of the 1st junction box.

Adjust the switch on the junction box following the table.

Box	Address
1	1 (fig. K-3)
2	2 (fig. K-4)

In case only 1 box is included in the system it should always have address 1.

Following this the junction box can be connected to the mains power supply.

Directions for use

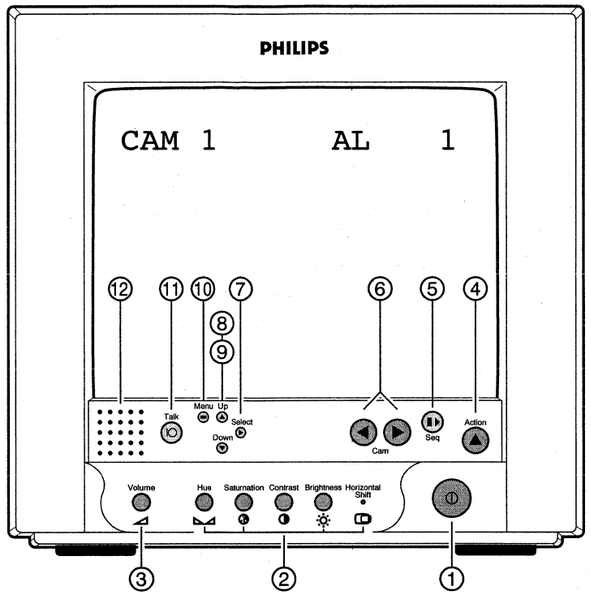


Figure A

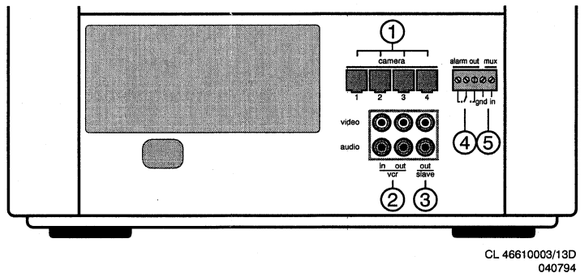
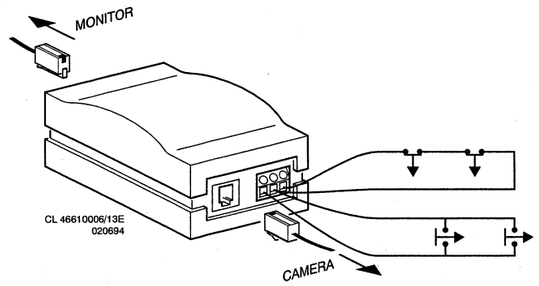
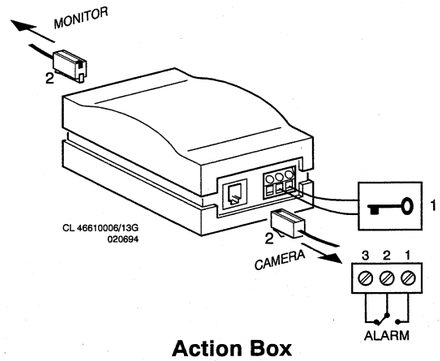


Figure B



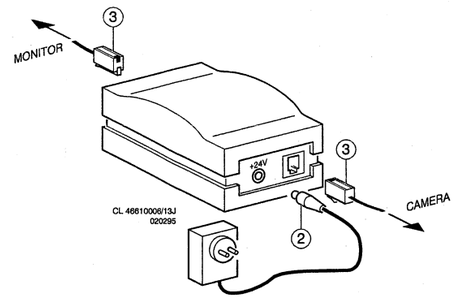
Alarm Box

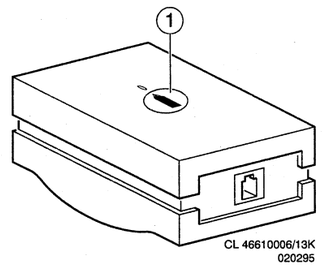
Figure F



Action Box

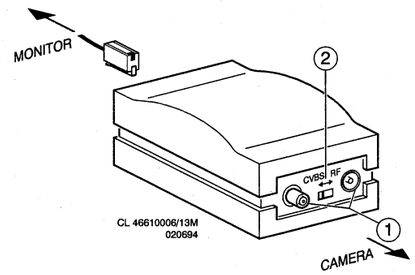
Figure G





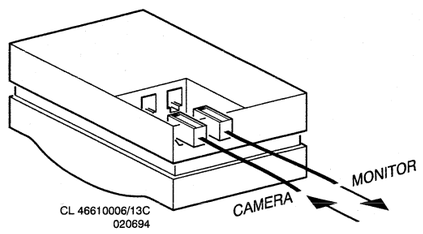
Cable Extension Adaptor

Figure H



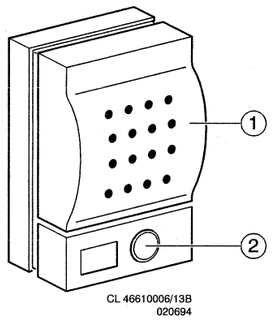
Camera Interface Box

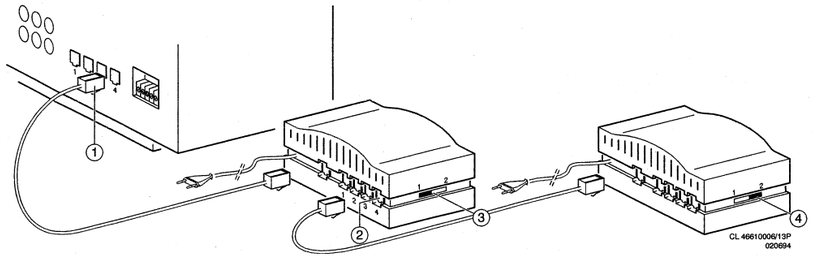
Figure J



Intercom Box

Figure E



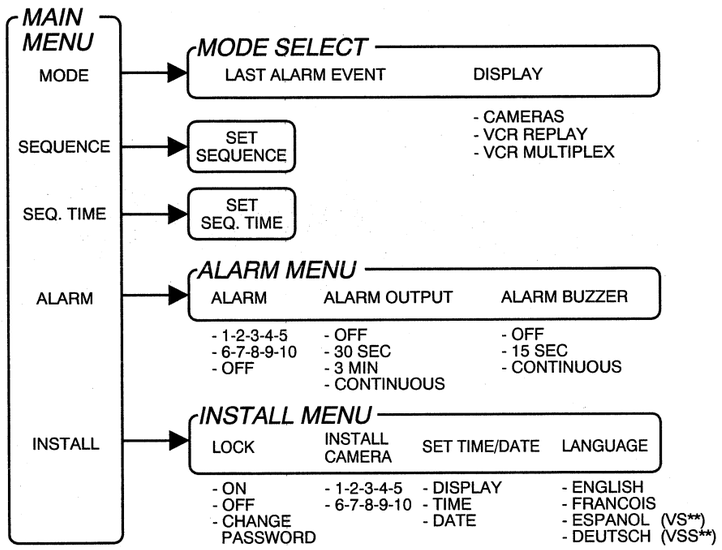


Junction Box

Figure F

Directions for use

MENU STRUCTURE (M1)



MAIN MENU (M2)

```
MAIN MENU

MODE:  CAM
SEQUENCE:  1-2-3-4-5-6-7-8-9-10
SEQUENCE TIME:  60 SEC
ALARM:  1-3-5-7- ... OFF
INSTALL
```

MODE MENU (M3)

```
SELECT MODE

CAMERAS
VCR REPLAY
VCR MULTIPLEX

LAST ALARM EVENT:
12:00
01-07
```

SEQUENCE MENU (M4)

```
SET SEQUENCE

1-2-3-4-5-6-7-8-9-10

STORE


NEW SEQUENCE
1-1-2-3-5-7-9-4
```

SEQUENCE TIME MENU (M5)

```
SET SEQUENCE TIME

 2  SEC
 4  SEC
 7  SEC
10  SEC
20  SEC
60  SEC
```

ALARM MENU (M6)

```
ALARM MENU

ALARM:  1-2-3-4-5-6-7-8-... OFF
ALARM OUTPUT:   3 MIN
ALARM BUZZER:  15 SEC
```

ALARM CAMERA MENU (M7)

```
SET ALARM CAMERA

 1  ON
 2  ON
 3  ON
 4  ON
 5  ON
 6  ON
 7  ON
 8  OFF
 9  OFF
10  OFF
STORE
```

ALARM OUTPUT MENU (M8)

```
SET ALARM OUTPUT

OFF
30 SEC
 3 MIN
CONTINUOUS
```

ALARM BUZZER MENU (M9)

```
SET ALARM BUZZER

OFF
15 SEC
CONTINUOUS
```

INSTALL MENU (M10)

```
INSTALL MENU

LOCK:  OFF
LANGUAGE: ENGLISH
INSTALL CAMERAS
SET TIME/DATE
```

LOCK MENU (M11)

```
LOCK

OFF
ON
CHANGE PASSWORD
```

PASSWORD MENU (M12)

```
ENTER NEW PASSWORD
■ ■ ■ ■

STORE
CANCEL
```

TIME/DATE MENU (M13)

```
SET TIME/DATE

DISPLAY:  RIGHT BOTTOM
TIME:  12:34:56
DATE:  94-01-31
```

TIME/DATE DISPLAY MENU (M14)

```
TIME/DATE DISPLAY

OFF
LEFT BOTTOM
RIGHT BOTTOM
```

TIME MENU (M15)

```
SET TIME  /HH-MM-SS/

12 : 35 : 56

STORE
```

DATE MENU (M16)

```
SET DATE  /YY-MM-DD/

94 : 01 : 31

STORE
```

LANGUAGE MENU (M17)

```
SELECT LANGUAGE

ENGLISH
FRANCAIS
ESPANOL  (VS**)
DEUTSCH  (VSS**)
```

CABLE MONITOR/ JUNCTION BOX MENU (M18)

```
CABLE MONITOR/JUNCTION BOX 1

  0 -  30M
 30 -  60M
 60 -  90M
 90 - 120M
120 - 150M
```

CABLE JUNCTION BOX MENU (M19)

```
CABLE JUNCTION BOX 1/2

  0 -  30M
 30 -  60M
 60 -  90M
 90 - 120M
120 - 150M
```

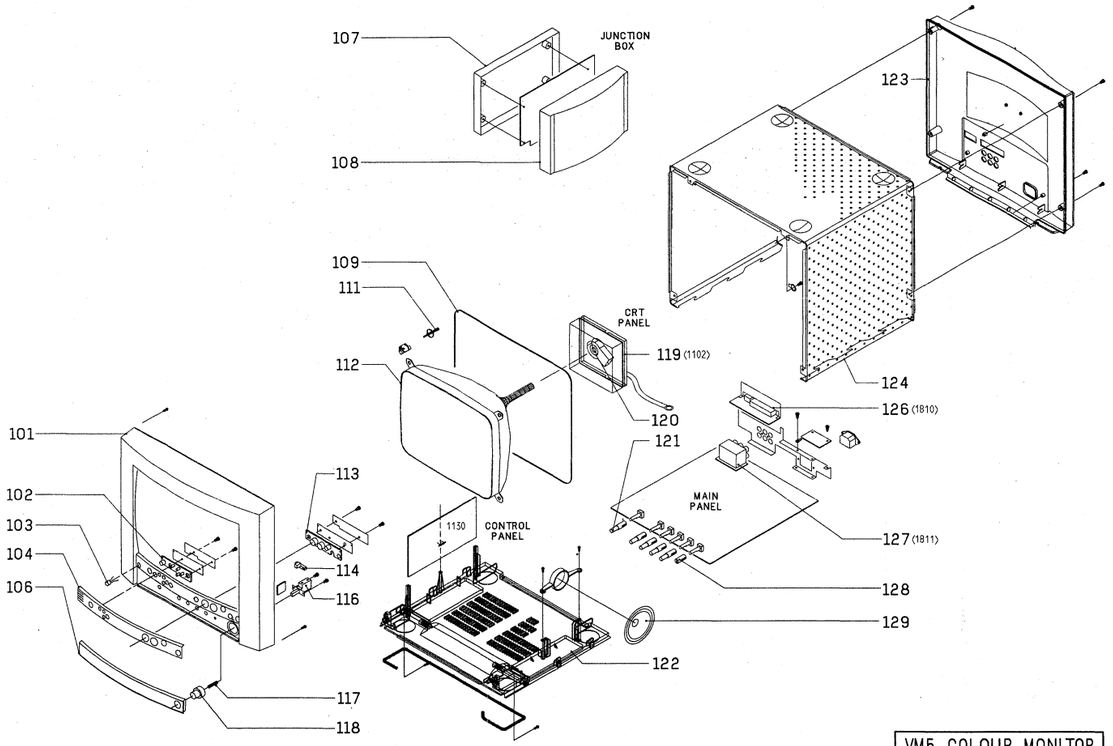
CHOOSE PICTURE FOR CAMERA MENU (M20)

```
CHOOSE PICTURE FOR CAM 1









CLEAR ALL
```

CABLE STEP FOR CAMERA MENU (M21)

```
CABLE COMP. FOR CAM 1

1
2
3
4
5
```

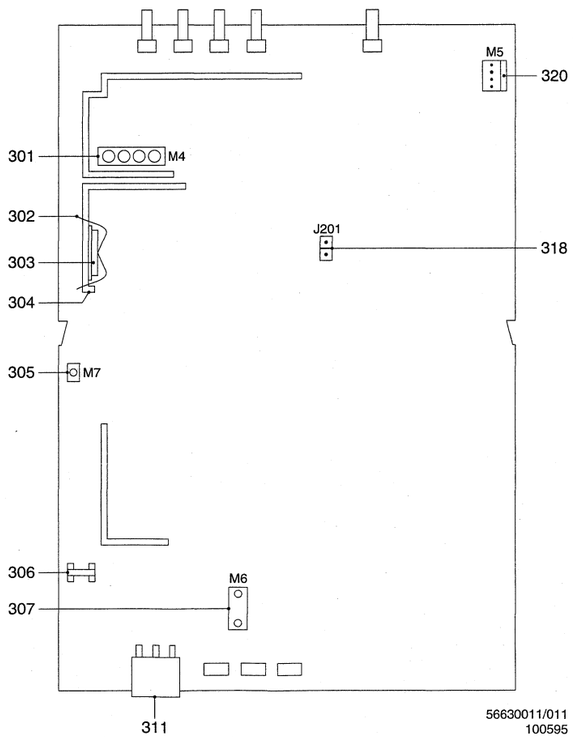
15. Exploded views



VM5 COLOUR MONITOR

CL56630027/011
120495

MAIN CHASSIS



56630011/011
100595

16. Spare parts lists

Parts indicated on exploded views

101	4822 430 20116	Front assy
102	4822 466 62618	Key pad left
103	4822 242 30329	Microphone
104	4822 459 40799	Bezzel (for controls knobs)
106	4822 432 93184	Lid for controls
107	4822 432 93346	Bottom plate (Junction box)
108	4822 432 93347	Cover (Junction box)
109 !	4822 157 60478	Degaussing coil (/00T) item 5104)
109 !	4822 157 62464	Degaussing coil (VS82505T item 5104)
111	4822 502 21586	Screw for CRT
112 !	4822 131 20149	M34EAQ10X01
113	4822 466 62619	Key pad right
114	4822 381 11447	Lens for led
116 !	4822 276 13395	Mains switch
117	4822 492 71427	Spring for power switch
118	4822 410 62936	Power push button
119	4822 212 23633	CRT panel
120	4822 255 70216	CRT socket
121	4822 413 41826	Knob for controls
122	4822 437 50025	Bottom plate
123	4822 438 20276	Rear cover
124	4822 430 20115	Cabinet
126	4822 212 31964	Camera interface panel
127	4822 212 31965	Cinch interface panel
128	4822 413 31779	Knob for hor. Shift
129	4822 240 30296	Loudspeaker item 5295
!	4822 321 10982	Mains cord (/00T)
!	4822 321 22552	Mains cord (VS82505T)
	4822 256 92289	Holder for pos. 103 (microphone)
301	4822 265 30375	4P connector M4
302	4822 492 62076	Spring for 7512
303	4822 255 93161	Plate for 7512
304	5322 390 20011	Silicon grease
305	4822 265 20366	1P connector M7
306	4822 492 71337	Spring for fuseholder
307	4822 267 40646	2P connector M6
311	4822 267 31214	Mains AC-inlet
318	4822 265 20235	2P connector M2
320	4822 265 30408	4P connector M5
	4822 157 70919	Toroidal coil assy

Interface panel 1810

1810	4822 212 31964	PANEL COMPLETE
CON 1	4822 267 41201	SCREWBLOCK
CON 2	4822 265 31264	5 PINS
CON 3	4822 267 41181	6 PINS
CON 4	4822 267 41181	6 PINS
CON 5	4822 267 41181	6 PINS
CON 6	4822 267 41181	6 PINS
CON 8	4822 265 31263	PTT PLUG
CON 9	4822 265 31263	PTT PLUG
CON 10	4822 265 31263	PTT PLUG
CON 11	4822 265 31263	PTT PLUG

Cinch interface panel 1811

1811	4822 212 31965	PANEL COMPLETE
CON 7	4822 267 41182	CINCH CONNECTOR BLOCK
CON 12	4822 265 41487	9 PINS

Hum board 1295

2000	5322 122 34123	1nF 10% 50V
2001	4822 126 10002	100nF 20% 25V
2002	4822 122 33177	10nF 20% 50V
3001	4822 051 20473	47k 5% 0.1W
3002	4822 051 10102	1k 2% 0.25W
3003	4822 051 20103	10k 5% 0.1W

Main chassis parts

Various

1100	4822 131 20149	M34EAQ10X01
M4	4822 265 30375	4 PINS
M7	4822 265 20366	CONNECTOR
M5	4822 265 30408	4 PINS
M6	4822 267 40646	2 PINS
	5322 390 20011	SILICONE GREASE
	4822 492 71337	CLAMPING SPRING FOR FUSE
1401▲	5322 253 30373	FUSE 2A
1401▲	4822 253 30175 (VS82505T)	FUSE 3,0A
1627	4822 242 70304	8,867 238 MHz
1627	4822 242 71284	7,159 090 MHz (VS82505T)

2251	4822 121 43696	100nF 100V
2258	4822 124 42081	2.7nF 5% 63V
2261	4822 121 43518	150nF 100V
2262	4822 121 43513	100nF 100V
2264	4822 122 31125	4.7nF 80% 63V
2266	4822 124 41659	4.7µF 20% 25V
2267	4822 121 43513	100nF 100V
2268	4822 124 42197	2.2µF 20% 63V
2269	4822 124 40804	22µF 20% 63V
2270	5322 122 32343	47pF 2% 100V
2272	4822 124 40804	22µF 20% 63V
2273	4822 122 30103	22nF 80% 63V
2274	4822 124 22678	100µF 20% 16V
2275	4822 122 33966	10nF 10% 50V
2291	4822 124 42172	1000µF 16V
2292	4822 121 43696	100nF 100V
2294	4822 121 43696	100nF 100V
2301	4822 124 40804	22µF 20% 63V
2302	4822 122 30103	22nF 80% 63V
2303	5322 122 32143	22pF 100V
2304	4822 121 43519	220nF 100V
2307	4822 122 32185	10pF 2% 100V
2402▲	5322 121 44212	1µF 10% 275B
2402▲	4822 121 43385	47nF 20% 250V (VS82505T)
2403▲	4822 122 33652	2.2nF 20% 400V
2403▲	4822 126 10897	4.7nF 20% 400V (VS82505T)
2404▲	4822 122 33652	2.2nF 20% 400V
2404▲	4822 126 10897	4.7nF 20% 400V (VS82505T)
2405	4822 121 43385	47nF 20% 250V
2406	4822 121 43385	47nF 20% 250V
2406	4822 121 42059	100nF 10% 400V (VS82505T)
2407	4822 126 13451	2.2nF 10% 2KV
2408	4822 126 11388	2.2nF 1KV
2409	4822 126 13451	2.2nF 10% 2KV
2410	4822 126 13451	2.2nF 10% 2KV
2412	4822 124 21722	100µF 50% 400V
2412	4822 124 10531	220µF 30% 200V (VS82505T)
2416	4822 124 23539	10µF 20% 50V
2417	4822 122 33966	10nF 10% 50V
2422	4822 124 22669	1µF 20% 50V
2422	4822 121 43913	470nF 10% 100V (VS82505T)
2423	4822 121 51106	100nF 10% 100V
2424	4822 121 43512	15nF 100V
2429	4822 121 43699	220nF 100V
2429	4822 121 43696	100nF 100V (VS82505T)
2431	5322 122 32818	2.2nF 10% 100V
2432	4822 121 50966	2.2nF 20% 1KV
2432	4822 121 43731	4.7nF 5% 1KV (VS82505T)
2433	4822 121 43516	47nF 400V
2441	4822 122 33645	220pF 500V
2442	4822 122 33645	220pF 500V
2443	4822 122 33645	220pF 500V
2444	4822 122 33645	220pF 500V
2445	4822 124 41865	470µF 20% 35V
2446	4822 124 42144	470µF 63V
2447	4822 124 42144	470µF 63V
2450	4822 124 23539	10µF 20% 50V
2451	4822 124 41281	47 µF 200V
2452	4822 124 40804	22µF 20% 63V
2510	4822 126 12149	27pF 5% 500V
2511	4822 124 42166	2.2µF 20% 63V
2512	4822 124 40804	22µF 20% 63V
2514	4822 122 40427	470pF 2kV
2515	4822 124 41867	1µF 20% 250V
2517	4822 121 43061	8.2nF 5% 1.6KV
2518	4822 121 43392	22nF 10%
2519	4822 121 43671	560nF 10% 250V
2520	4822 124 22499	10µF 160V
2524	4822 124 90034	4.7µF 50V
2526	4822 124 22669	1µF 20% 50V
2531	4822 121 43517	120nF 100V
2532	4822 122 33966	10nF 10% 50V
2536	4822 124 22669	1µF 20% 50V
2537	4822 124 40804	22µF 20% 63V
2540	4822 122 33645	220pF 500V
2541	4822 124 40804	22µF 20% 63V
2543	4822 121 43512	15nF 100V
2544	4822 121 40336	47nF 10% 250V
2547	4822 124 42166	2.2µF 20% 63V
2554	4822 122 31125	4.7nF 80% 63V
2555	4822 122 31125	4.7nF 80% 63V
2556	5322 122 32052	680pF 10% 100V
2560	4822 124 42173	220µF 35V
2561	4822 124 42173	220µF 35V
2563	4822 124 41865	470µF 20% 35V
2571	4822 124 41866	680µF 20% 35V
2573	4822 124 42198	1.5µF 20% 63V
2575	4822 121 43696	100nF 100V
2601	4822 124 22678	100µF 20% 16V
2602	4822 122 30103	22nF 80% 63V
2603	5322 122 32331	1nF 10% 100V
2603	4822 126 13577	22nF 10% 100V (VS82505T)
2604	4822 124 22669	1µF 20% 50V
2604	5322 121 42661	330nF 5% 63V (VS82505T)
2605	4822 121 43698	470nF 100V
2605	4822 126 10757	22nF 20% 50V (VS82505T)
2606	4822 121 43521	47nF 250V
2607	4822 121 43696	100nF 100V
2607	4822 126 10757	22nF 20% 50V (VS82505T)
2608	4822 121 43696	100nF 100V
2609	4822 122 31823	15pF 2% 100V
2609	4822 122 31069	39pF 2% 100V (VS82505T)
2610	4822 122 31056	12pF 2% 100V
2610	4822 122 30045	27pF 2% 100V (VS82505T)
2611	4822 122 33966	10nF 10% 50V
2612	4822 121 43698	470nF 100V
2612	4822 121 43697	330nF 10% 100V (VS82505T)
2613	4822 125 50088	1p8-27p 250V
2614	4822 122 33966	10nF 10% 50V
2616	4822 122 30103	22nF 80% 63V
2617	4822 122 30103	22nF 80% 63V
2618	4822 121 43699	220nF 100V
2618	4822 122 33966	10nF 10% 50V (VS82505T)
2629	4822 122 31056	12pF 2% 100V
2640	4822 124 22678	100µF 20% 16V
2641	4822 122 30103	22nF 80% 63V
2642	4822 122 30103	22nF 80% 63V
2643	4822 122 30103	22nF 80% 63V
2644	4822 122 30103	22nF 80% 63V
2645	4822 121 70178	330nF 100V
2646	4822 121 43697	330nF 10% 100V
2647	4822 124 41659	4.7µF 20% 25V
2648	4822 122 30103	22nF 80% 63V
2649	4822 121 43697	330nF 10% 100V
2651	4822 122 30103	22nF 80% 63V
2652	4822 121 43696	100nF 100V
2653	4822 121 43696	100nF 100V
2654	4822 121 43696	100nF 100V
2669	4822 124 23539	10µF 20% 50V
2673	4822 122 31353	330pF 2% 100V
2682	4822 122 31353	330pF 2% 100V
2688	4822 122 31353	330pF 2% 100V
2695	4822 122 30103	22nF 80% 63V
2696	4822 124 22681	47µF 20% 16V
2697	4822 124 22681	47µF 20% 16V
3257	4822 100 20166	10k POTMETER
3258	4822 050 23003	30k 1% 0.6W
3261	4822 050 21503	15k 1% 0.6W
3262	4822 050 24702	4k7 1% 0.6W
3263	4822 050 22203	22k 1% 0.6W
3264	4822 100 90079	10k POTMETER
3266	4822 050 21502	1k5 1% 0.6W
3268	4822 050 29102	9k1 1% 0.6W
3269	4822 050 21001	100Ω 1% 0.6W
3271	4822 116 80546	1M 5% 0.5W
3272	4822 050 24701	470Ω 1% 0.6W
3273▲	4822 052 10478	4Ω7 5% 0.33W
3274	4822 050 21003	10k 1% 0.6W
3293	4822 050 22203	22k 1% 0.6W
3294	4822 050 22703	27k 1% 0.6W
3295	4822 100 11612	20k 20%
3301	4822 050 22203	22k 1% 0.6W
3302	4822 050 21003	10k 1% 0.6W
3303	4822 050 27509	75Ω 1% 0.6W
3304	4822 050 24701	470Ω 1% 0.6W
3306	4822 050 21002	1k 1% 0.6W
3307	4822 050 25601	560Ω 1% 0.6W
3308	4822 050 22202	2k2 1% 0.6W
3309	4822 050 22202	2k2 1% 0.6W
3404	4822 116 40161	P.T.C.
3404	4822 116 40148	P.T.C. (VS82505T)
3410	4822 113 80466	4Ω7 10% 7W
3410	4822 113 80524	2Ω2 5% 7W (VS82505T)
3411	4822 050 22203	22k 1% 0.6W
3412	4822 050 23303	33k 1% 0.6W
3413	4822 050 22702	2k7 1% 0.6W
3414	4822 100 11348	1k POTMETER
3415	4822 050 22702	2k7 1% 0.6W
3416	4822 050 24702	4k7 1% 0.6W
3417	4822 050 23301	330Ω 1% 0.6W
3420	4822 050 27504	750k 1% 0.6W
3420	4822 050 24703	47k 1% 0.6W
3421	4822 050 27504	750k 1% 0.6W
3421	4822 050 21204	120k 1% 0.6W
3422	4822 050 21201	120Ω 1% 0.6W
3425	4822 050 22701	270Ω 1% 0.6W
3426	4822 050 22409	24Ω 1% 0.6W
3426	4822 050 22009	20Ω 1% 0.6W (VS82505T)
3427	4822 050 23302	3k3 1% 0.6W
3428	4822 050 23902	3k9 1% 0.6W
3429	4822 116 82599	100Ω 1W
3429	4822 116 82572	68Ω 5% 1W (VS82505T)
3430	4822 116 82985	100Ω 5% 1W
3431	4822 116 82985	100Ω 5% 1W
3431	4822 053 10689	68Ω 5% 1W (VS82505T)
3432	4822 116 80388	22k 5W
3436	4822 050 11809	18Ω 1% 0.4W
3443▲	4822 052 10158	1Ω5 5% 0.33W
3451▲	4822 052 10478	4Ω7 5% 0.33W
3452	4822 050 21002	1k 1% 0.6W
3460	4822 050 25101	510Ω 1% 0.6W
3470	4822 050 21001	100Ω 1% 0.6W
3509	4822 050 22201	220Ω 1% 0.6W
3510	4822 050 22202	2k2 1% 0.6W
3511	4822 116 83971	1k 5% 2W

3512▲	4822 052 10478	4Ω7 5% 0.33W
3513	4822 116 83043	2Ω2 5% 2W
3514	4822 050 26809	68Ω 1% 0.6W
3515	4822 050 23303	33k 1% 0.6W
3520	4822 113 80465	10Ω 5% 5W
3522▲	4822 052 10222	2k2 5% 0.33W
3523▲	4822 052 10222	2k2 5% 0.33W
3526▲	4822 052 10478	4Ω7 5% 0.33W
3530	4822 050 22202	2k2 1% 0.6W
3531	4822 050 24703	47k 1% 0.6W
3533	4822 050 21004	100k 1% 0.6W
3534	4822 101 10547	10k 20% 0.25W
3536	4822 050 24703	47k 1% 0.6W
3537	4822 100 11585	22k POTEMETER
3540▲	4822 052 10158	1Ω5 5% 0.33W
3541	4822 050 24709	47Ω 1% 0.6W
3542	4822 050 22002	2k 1% 0.6W
3543	4822 050 24704	470k 1% 0.6W
3544	4822 050 21203	12k 1% 0.6W
3545	4822 050 24704	470k 1% 0.6W
3546	4822 050 21004	100k 1% 0.6W
3548▲	4822 052 10158	1Ω5 5% 0.33W
3550	4822 100 10915	220Ω POTMETER
3551	4822 050 22704	270k 1% 0.6W
3553	4822 050 21001	100Ω 1% 0.6W
3554	4822 050 24702	4k7 1% 0.6W
3555	4822 050 24702	4k7 1% 0.6W
3556	4822 050 21803	18k 1% 0.6W
3560	4822 050 22201	220Ω 1% 0.6W
3563▲	4822 052 10478	4Ω7 5% 0.33W
3570	4822 050 23301	330Ω 1% 0.6W
3571	4822 050 21804	180k 1% 0.6W
3572	4822 050 21503	15k 1% 0.6W
3573	4822 100 11141	10k POTMETER
3574	4822 050 21208	1Ω2 1% 0.6W
3575	4822 050 25608	5Ω6 1% 0.6W
3580	4822 050 23301	330Ω 1% 0.6W
3581	4822 050 22202	2k2 1% 0.6W
3583	4822 101 10547	10k 20% 0.25W
3585	4822 050 22701	270Ω 1% 0.6W
3586	4822 050 23902	3k9 1% 0.6W
3601▲	4822 052 10478	4Ω7 5% 0.33W
3602	4822 050 27509	75Ω 1% 0.6W
3603	4822 050 22203	22k 1% 0.6W
3604	4822 050 21003	10k 1% 0.6W
3605	4822 050 28201	820Ω 1% 0.6W
3606	4822 050 21801	180Ω 1% 0.6W
3607	4822 050 24701	470Ω 1% 0.6W
3608	4822 050 23301	330Ω 1% 0.6W
3609	4822 050 22202	2k2 1% 0.6W
3611	4822 050 25102	5k1 1% 0.6W (VS82505)
3612	4822 050 24702	4k7 1% 0.6W
3612	4822 050 21003	10k 1% 0.6W (VS82505T)
3614	4822 050 21202	1k2 1% 0.6W
3615	4822 050 23901	390Ω 1% 0.6W
3616	4822 050 22201	220Ω 1% 0.6W
3617	4822 050 22201	220Ω 1% 0.6W
3618	4822 050 21801	180Ω 1% 0.6W
3619	4822 101 10927	470Ω POTMETER
3620	4822 050 21003	10k 1% 0.6W
3621	4822 050 23305	3M3 1% 0.6W
3622	4822 050 23305	3M3 1% 0.6W
3625	4822 050 22704	270k 1% 0.6W (VS82505T)
3626	4822 050 28203	82k 1% 0.6W (VS82505T)
3627	4822 050 21003	10k 1% 0.6W (VS82505T)
3628	4822 050 21503	15k 1% 0.6W (VS82505T)
3629	4822 100 90079	10k POTMETER (VS82505T)
3640▲	4822 052 10478	4Ω7 5% 0.33W
3641	4822 050 24702	4k7 1% 0.6W
3642	4822 050 24702	4k7 1% 0.6W
3643	4822 050 24702	4k7 1% 0.6W
3644	4822 050 25102	5k1 1% 0.6W
3645	4822 050 21002	1k 1% 0.6W
3646	4822 050 21003	10k 1% 0.6W
3647	4822 050 21103	11k 1% 0.6W
3651	4822 050 26803	68k 1% 0.6W
3652	4822 050 21503	15k 1% 0.6W
3653	4822 050 21503	15k 1% 0.6W
3654	4822 100 90079	10k POTMETER
3655	4822 050 22004	200k 1% 0.6W
3656	4822 050 25603	56k 1% 0.6W
3657	4822 050 21504	150k 1% 0.6W
3658	4822 100 90081	10k POTMETER
3659	4822 050 21104	110k 1% 0.6W
3660	4822 050 21503	15k 1% 0.6W
3661	4822 050 21104	110k 1% 0.6W
3662	4822 100 90081	10k POTMETER
3663	4822 050 21003	10k 1% 0.6W
3667	4822 050 24702	4k7 1% 0.6W
3668	4822 050 23303	33k 1% 0.6W
3669▲	4822 052 10478	4Ω7 5% 0.33W
3670	4822 050 23301	330Ω 1% 0.6W
3671	4822 105 11023	1k POTMETER
3672	4822 050 21502	1k5 1% 0.6W
3673	4822 050 26809	68Ω 1% 0.6W
3674	4822 050 26802	6k8 1% 0.6W
3675	4822 050 21501	150Ω 1% 0.6W
3679	4822 050 21001	100Ω 1% 0.6W
3680	4822 105 11023	1k POTMETER
3681	4822 050 21502	1k5 1% 0.6W
3682	4822 050 26809	68Ω 1% 0.6W
3683	4822 050 26802	6k8 1% 0.6W
3685	4822 050 21501	150Ω 1% 0.6W
3686	4822 050 24701	470Ω 1% 0.6W
3687	4822 050 22202	2k2 1% 0.6W
3688	4822 050 26809	68Ω 1% 0.6W
3689	4822 050 26802	6k8 1% 0.6W
3691	4822 050 21501	150Ω 1% 0.6W
3692	4822 050 23302	3k3 1% 0.6W
3694	4822 050 22702	2k7 1% 0.6W
3695	4822 050 21502	1k5 1% 0.6W
3696	4822 050 23301	330Ω 1% 0.6W
3697	4822 050 15119	51Ω1 1% 0.4W
3698	4822 050 15119	51Ω1 1% 0.4W
9306	4822 050 21003	10K 1% 0,6W

5291	4822 157 53598	COIL 2.2µH
5301	4822 158 10837	BEAD COIL
5401▲	4822 148 60218	MAINS TRANSFORMER
5401▲	4822 146 30896	MAINS TRANSFORMER (VS82505T)
5402▲	4822 157 60489	MAINS FILTER
5431	4822 157 52233	COIL 10µH
5435	4822 157 62431	CHOKE 4µH
5436	4822 157 62431	CHOKE 4µH
5510▲	4822 140 10381	LINE TRANSFORMER
5512	4822 142 40322	DRIVER
5513	4822 152 20587	COIL 7.5µH
5522	4822 157 60488	LINEARITY COIL
5523	4822 157 53122	COIL 650 µH
5524	4822 157 60486	COIL 470 µH
5541	4822 157 60483	COIL 82 µH
5605	4822 157 60487	COIL 4.43 MHz
5605	4822 157 62429	COIL 3.58 MHz (VS82505T)
5606	4822 157 51056	DELAY LINE 330 NSEC
5608	4822 157 52697	COIL 27µH
5631	4822 320 40096	DELAY LINE DL701
5632	4822 157 60484	COIL 2.52 MHz
5637	4822 157 52494	COIL 6.8 µH
5661	4822 152 20626	CHOKE 2.2 µH
5662	4822 152 20626	CHOKE 2.2 µH
5663	4822 152 20626	CHOKE 2.2 µH

6304	4822 130 30621	1N4148
6407	4822 130 31933	1N5061
6408	4822 130 31933	1N5061
6409	4822 130 31933	1N5061
6410	4822 130 31933	1N5061
6415	4822 130 34167	BZX79-B6V2
6421	4822 130 30621	1N4148
6425	4822 130 30621	1N4148
6426	4822 130 30621	1N4148
6427	4822 130 30621	1N4148
6428	4822 130 30862	BZX79-C9V1
6429	4822 130 30621	1N4148
6430	4822 130 30621	1N4148
6431	4822 130 30621	1N4148
6432	4822 130 30621	1N4148
6433	4822 130 34174	BZX79-C4V7
6434	4822 130 81766	1N5062
6435	4822 130 81766	1N5062
6440	5322 130 31969	RGP15K
6441	5322 130 31969	RGP15K
6442	4822 130 42606	BYD33J
6443	5322 130 31971	RGP15D
6444	5322 130 31971	RGP15D
6452	4822 130 34281	BZX79-F15
6453	4822 130 42606	BYD33J
6454	4822 130 34281	BZX79-F15
6470	4822 130 34167	BZX79-B6V2
6510	4822 130 42606	BYD33J
6513	4822 130 42606	BYD33J
6514	4822 130 42606	BYD33J
6515	4822 130 42606	BYD33J
6517	4822 130 41275	BY228
6518	4822 130 41487	BYV95C
6540	4822 130 42606	BYD33J
6546	4822 130 30621	1N4148
6547	4822 130 31024	BZX79-B18
6548	4822 130 34173	BZX79-F5V6
6560	4822 130 31878	1N4003
6646	4822 130 30621	1N4148
6647	4822 130 30621	1N4148
6661	4822 130 30621	1N4148
6662	4822 130 30621	1N4148
6663	4822 130 30621	1N4148
6667	4822 130 30621	1N4148
6692	4822 130 30621	1N4148

7270	4822 209 72363	TDA2579A/N8
7295	4822 209 60956	TDA7052/N1
7304	4822 130 40938	BC548
7306	4822 130 44197	BC558B
7401	4822 209 71634	TCDT1101G
7417	4822 130 40937	BC548B
7421	4822 130 41344	BC337-40
7432	4822 130 42679	BUT11AF
7432	4822 130 60783	2SC3832 (VS82505T)
7450	4822 209 81726	L7812CV
7452	5322 130 24081	BT151-500R
7470	4822 130 44197	BC558B
7510	4822 130 41053	BC639
7512	4822 130 61265	BU508AF
7526	4822 130 41774	BD826
7530	4822 130 40937	BC548B
7560	4822 209 60955	TDA3653B/N1
7580	4822 130 44197	BC558B
7585	4822 130 40937	BC548B
7603	4822 130 40937	BC548B
7610	4822 209 30389	TDA4510/V2
7610	4822 209 71398	TDA4570/V7 (VS82505T)
7640	4822 209 71971	TDA3505/V4
7671	4822 130 40937	BC548B
7680	4822 130 40937	BC548B
7687	4822 130 40937	BC548B
7695	4822 130 44197	BC558B
7696	4822 130 40937	BC548B

CRT Panel 1102

1102	4822 212 23633	CRT PANEL COMPLETE
	4822 265 20366	CONNECTOR
	4822 265 30784	5 PIN
	4822 265 30783	4 PIN
	4822 255 70216	SOCKET FOR CRT

2134	4822 122 33646	470pF 10% 500V
2135	4822 121 42004	10nF 10% 400V
2136	4822 124 22023	4.7µF 200V
2138	4822 122 33966	10nF 10% 50V
2139	4822 121 43522	33nF 630V
2140	4822 122 33966	10nF 10% 50V
2141	4822 124 40804	22µF 20% 63V
2142	5322 122 32332	1.5nF 10% 100V

3107	5322 100 11542	4k7 POTMETER
3108	4822 050 21502	1k5 1% 0.6W
3109	4822 050 24709	47Ω 1% 0.6W
3110	4822 050 21002	1k 1% 0.6W
3111	4822 053 12392	3k9 5% 3W
3112	4822 050 24701	470Ω 1% 0.6W
3117	5322 100 11542	4k7 POTMETER
3118	4822 050 21502	1k5 1% 0.6W
3119	4822 050 24709	47Ω 1% 0.6W
3120	4822 050 21002	1k 1% 0.6W
3121	4822 053 12392	3k9 5% 3W
3122	4822 050 24701	470Ω 1% 0.6W
3127	5322 100 11542	4k7 POTMETER
3128	4822 050 21502	1k5 1% 0.6W
3129	4822 050 24709	47Ω 1% 0.6W
3130	4822 050 21002	1k 1% 0.6W
3131	4822 053 12392	3k9 5% 3W
3132	4822 050 24701	470Ω 1% 0.6W
3138	4822 116 80547	1k5 5% 0.5W
3139	4822 116 80547	1k5 5% 0.5W

5111	4822 157 60485	COIL 47µH
5121	4822 157 60485	COIL 47µH
5131	4822 157 60485	COIL 47µH
5133	4822 152 20587	COIL 7.5µH
5134	4822 152 20587	COIL 7.5µH
5135	4822 157 60483	COIL 82µH
5140	4822 157 60483	COIL 82µH

6112	4822 130 30842	BAV21
6122	4822 130 30842	BAV21
6132	4822 130 30842	BAV21
6460	4822 130 33742	LTL4234

7110	4822 130 41773	BF869
7120	4822 130 41773	BF869
7130	4822 130 41773	BF869

System Control Panel 1130

1130	4822 212 31962	PANEL COMPLETE
1130	4822 212 31967	PANEL COMPLETE (VS82505T)
1100	4822 265 31265	6 PINS
1226	4822 265 41487	9 PINS
1231	4822 265 31263	4 PINS
1245	4822 265 20717	2 PINS
1310	4822 265 31263	4 PINS
1340	4822 242 81268	RESONATOR
1362	4822 265 31262	3 PINS
1377	4822 265 31264	5 PINS
1395	4822 281 50169	RELAY
1396	4822 265 31264	5 PINS
1412	4822 242 70416	CRYSTAL
1431	4822 265 31262	3 PINS

2126	4822 122 33177	10nF 20% 50V
2127	4822 122 33809	22nF 20% 50V
2135	4822 122 33797	47nF 20% 50V
2136	5322 122 33861	120pF 10% 50V
2137	5322 122 32277	33pF N470 100V
2138	4822 122 33797	47nF 20% 50V
2139	4822 122 33809	22nF 20% 50V
2141	4822 122 33809	22nF 20% 50V
2142	5322 122 32481	15pF 5% 50V
2146	5322 122 32277	33pF N470 100V
2147	5322 122 33861	120pF 10% 50V
2148	5322 122 33861	120pF 10% 50V
2153	4822 126 10002	100nF 20% 25V
2154	4822 122 33173	560pF 10% 50V
2171	4822 124 40248	10µF 20% 63V
2180	4822 124 40248	10µF 20% 63V
2195	4822 124 40248	10µF 20% 63V
2206	4822 124 41643	100µF 20% 16V
2213	4822 124 41643	100µF 20% 16V
2216	4822 124 40248	10µF 20% 63V
2218	4822 122 33514	68pF 5% 50V
2219	4822 124 40248	10µF 20% 63V
2220	4822 122 33797	47nF 20% 50V
2226	4822 126 10002	100nF 20% 25V
2237	4822 126 10002	100nF 20% 25V
2238	4822 126 10002	100nF 20% 25V
2245	4822 124 40248	10µF 20% 63V
2250	4822 126 10002	100nF 20% 25V
2251	4822 126 10002	100nF 20% 25V
2257	4822 124 40248	10µF 20% 63V
2260	4822 122 33797	47nF 20% 50V
2261	4822 124 40248	10µF 20% 63V
2262	4822 122 33797	47nF 20% 50V
2263	4822 126 10002	100nF 20% 25V
2270	4822 124 40248	10µF 20% 63V
2271	4822 124 40248	10µF 20% 63V
2272	4822 122 33797	47nF 20% 50V
2275	4822 124 41643	100µF 20% 16V
2276	4822 122 33797	47nF 20% 50V
2277	4822 124 40248	10µF 20% 63V
2300	4822 122 33177	10nF 20% 50V
2301	4822 124 40433	47µF 20% 25V
2303	4822 126 10002	100nF 20% 25V
2304	4822 124 40248	10µF 20% 63V
2305	4822 126 13561	220nF 10% 16V
2306	4822 126 13561	220nF 10% 16V
2307	4822 126 10002	100nF 20% 25V

Spare parts lists

2308	4822 126 10002	100nF 20% 25V
2310	4822 122 33177	10nF 20% 50V
2311	4822 122 33177	10nF 20% 50V
2315	4822 122 33177	10nF 20% 50V
2340	5322 122 31946	27pF 5% 63V
2341	5322 122 31946	27pF 5% 63V
2344	5322 122 32966	39pF 5% 50V
2345	5322 122 32966	39pF 5% 50V
2360	5322 122 34123	1nF 10% 50V
2390	4822 122 33173	560pF 10% 50V
2391	4822 122 33809	22nF 20% 50V
2395	4822 122 33177	10nF 20% 50V
2396	4822 124 40248	10µF 20% 63V
2400	4822 122 33797	47nF 20% 50V
2401	4822 124 41643	100µF 20% 16V
2405	4822 122 33177	10nF 20% 50V
2406	4822 138 10521	BATTERY 3 VOLT
2412	5322 122 32659	33pF 5% 50V
2413	4822 125 50092	2p-40p 250V
2423	4822 122 33809	22nF 20% 50V
2425	4822 122 33797	47nF 20% 50V
2427	4822 122 33177	10nF 20% 50V

3101	4822 051 20472	4k7 5% 0.1W
3102	4822 051 20332	3k3 5% 0.1W
3103	4822 051 20472	4k7 5% 0.1W
3118	4822 051 20473	47k 5% 0.1W
3119	4822 051 20473	47k 5% 0.1W
3120	4822 117 11496	62Ω 1% 0.1W
3121	4822 117 11496	62Ω 1% 0.1W
3122	4822 051 20561	560Ω 5% 0.1W
3123	4822 051 20222	2k2 5% 0.1W
3124	4822 051 20222	2k2 5% 0.1W
3125	4822 051 20103	10k 5% 0.1W
3126	4822 051 20103	10k 5% 0.1W
3128	4822 051 20224	220k 5% 0.1W
3129	4822 051 20104	100k 5% 0.1W
3130	4822 117 11139	1k5 1% 0.1W
3131	4822 051 20331	330Ω 5% 0.1W
3132	4822 051 20109	10Ω 5% 0.1W
3133	4822 051 20473	47k 5% 0.1W
3134	4822 051 20473	47k 5% 0.1W
3135	4822 051 20222	2k2 5% 0.1W
3136	4822 051 20103	10k 5% 0.1W
3137	4822 051 20103	10k 5% 0.1W
3138	4822 051 20472	4k7 5% 0.1W
3139	4822 051 20472	4k7 5% 0.1W
3141	4822 051 20103	10k 5% 0.1W
3142	4822 051 20109	10Ω 5% 0.1W
3152	4822 051 20103	10k 5% 0.1W
3154	4822 051 20223	22k 5% 0.1W
3180	4822 051 20229	22Ω 5% 0.1W
3181	4822 051 20689	68Ω 5% 0.1W
3182	4822 051 20221	220Ω 5% 0.1W
3183	4822 051 20221	220Ω 5% 0.1W
3187	4822 051 10102	1k 2% 0.25W
3188	4822 051 20182	1k8 5% 0.1W
3189	4822 051 20332	3k3 5% 0.1W
3190	4822 051 10102	1k 2% 0.25W
3195	4822 051 20229	22Ω 5% 0.1W
3196	4822 051 20471	470Ω 5% 0.1W
3197	4822 051 20689	68Ω 5% 0.1W
3205	4822 051 20472	4k7 5% 0.1W
3206	4822 051 20472	4k7 5% 0.1W
3207	4822 051 10759	75Ω 2% 0.25W
3209	4822 051 20103	10k 5% 0.1W
3210	4822 051 20222	2k2 5% 0.1W
3211	4822 051 20472	4k7 5% 0.1W
3212	4822 051 20472	4k7 5% 0.1W
3213	4822 051 20122	1k2 5% 0.1W
3215	4822 051 20392	3k9 5% 0.1W
3216	4822 117 11139	1k5 1% 0.1W
3217	4822 051 20391	390Ω 5% 0.1W
3218	4822 051 20681	680Ω 5% 0.1W
3219	4822 051 20473	47k 5% 0.1W
3220	4822 051 20222	2k2 5% 0.1W
3221	4822 051 20471	470Ω 5% 0.1W
3223	4822 051 20153	15k 5% 0.1W
3224	4822 051 20562	5k6 5% 0.1W
3225	4822 051 20471	470Ω 5% 0.1W
3226	4822 051 20689	68Ω 5% 0.1W
3227	4822 051 10102	1k 2% 0.25W
3230	4822 051 20471	470Ω 5% 0.1W
3231	4822 051 20689	68Ω 5% 0.1W
3235	4822 051 20472	4k7 5% 0.1W
3236	4822 051 20472	4k7 5% 0.1W
3237	4822 051 20103	10k 5% 0.1W
3240	4822 051 20473	47k 5% 0.1W
3241	4822 051 20223	22k 5% 0.1W
3242	4822 051 20103	10k 5% 0.1W
3243	4822 051 20103	10k 5% 0.1W
3245	4822 051 20331	330Ω 5% 0.1W
3246	4822 051 20222	2k2 5% 0.1W
3247	4822 051 20331	330Ω 5% 0.1W
3250	4822 051 20105	1M 5% 0.1W
3251	4822 051 20472	4k7 5% 0.1W
3252	4822 051 20104	100k 5% 0.1W
3253	4822 051 20473	47k 5% 0.1W
3255	4822 051 20122	1k2 5% 0.1W
3256	4822 051 20331	330Ω 5% 0.1W
3257	4822 051 20472	4k7 5% 0.1W
3258	4822 051 20103	10k 5% 0.1W
3261	4822 051 20473	47k 5% 0.1W
3275	4822 051 20109	10Ω 5% 0.1W
3300	4822 051 20339	33Ω 5% 0.1W
3301	4822 051 20103	10k 5% 0.1W
3302	4822 051 20472	4k7 5% 0.1W
3303	4822 051 20471	470Ω 5% 0.1W
3304	4822 051 20332	3k3 5% 0.1W
3305	4822 051 10102	1k 2% 0.25W
3306	4822 051 20121	120Ω 5% 0.1W
3310	4822 051 20682	6k8 5% 0.1W
3311	4822 051 20153	15k 5% 0.1W
3312	4822 051 20472	4k7 5% 0.1W
3315	4822 051 20104	100k 5% 0.1W
3316	4822 051 20472	4k7 5% 0.1W
3321	4822 051 20103	10k 5% 0.1W
3325	4822 051 20103	10k 5% 0.1W
3326	4822 051 20103	10k 5% 0.1W
3327	4822 051 20103	10k 5% 0.1W
3328	4822 051 20103	10k 5% 0.1W
3329	4822 051 20103	10k 5% 0.1W
3330	4822 051 20103	10k 5% 0.1W
3331	4822 051 20103	10k 5% 0.1W
3332	4822 051 20103	10k 5% 0.1W
3333	4822 051 20103	10k 5% 0.1W
3340	4822 051 10102	1k 2% 0.25W
3350	4822 051 20222	2k2 5% 0.1W
3352	4822 051 20103	10k 5% 0.1W
3353	4822 051 20103	10k 5% 0.1W
3354	4822 051 20103	10k 5% 0.1W
3355	4822 051 10102	1k 2% 0.25W
3362	4822 051 20471	470Ω 5% 0.1W
3367	4822 051 20472	4k7 5% 0.1W
3368	4822 051 20471	470Ω 5% 0.1W
3370	4822 051 10102	1k 2% 0.25W
3371	4822 051 20392	3k9 5% 0.1W
3372	4822 051 20392	3k9 5% 0.1W
3373	4822 051 20392	3k9 5% 0.1W
3374	4822 051 20331	330Ω 5% 0.1W
3375	4822 051 20821	820Ω 5% 0.1W
3376	4822 051 20821	820Ω 5% 0.1W
3377	4822 051 20821	820Ω 5% 0.1W
3385	4822 051 20222	2k2 5% 0.1W
3386	4822 051 20222	2k2 5% 0.1W
3387	4822 051 20103	10k 5% 0.1W
3388	4822 051 20103	10k 5% 0.1W
3390	4822 051 20103	10k 5% 0.1W
3394	4822 051 20103	10k 5% 0.1W
3395	4822 051 20103	10k 5% 0.1W
3396	4822 051 20229	22Ω 5% 0.1W
3397	4822 051 20103	10k 5% 0.1W
3400	4822 051 20103	10k 5% 0.1W
3401	4822 051 20103	10k 5% 0.1W
3402	4822 051 20103	10k 5% 0.1W
3403	4822 051 20103	10k 5% 0.1W
3405	4822 051 20104	100k 5% 0.1W
3406	4822 051 20101	100Ω 5% 0.1W
3407	4822 051 20221	220Ω 5% 0.1W
3408	4822 051 20561	560Ω 5% 0.1W
3412	4822 051 20106	10M 5% 0.1W
3413	4822 051 20224	220k 5% 0.1W
3420	4822 051 20103	10k 5% 0.1W
3421	4822 051 20472	4k7 5% 0.1W
3422	4822 051 20103	10k 5% 0.1W
3424	4822 051 20472	4k7 5% 0.1W
3425	4822 051 20103	10k 5% 0.1W
3426	4822 051 20563	56k 5% 0.1W
3430	4822 051 20109	10Ω 5% 0.1W
3431	4822 051 20109	10Ω 5% 0.1W
3432	4822 051 20109	10Ω 5% 0.1W

5146	4822 157 71342	COIL 6.25MHz
5270	4822 157 50964	COIL 100µH
5344	4822 157 50965	COIL 15µH

6141	5322 130 34955	BA482
6165	4822 130 34449	BB204B
6190	5322 130 30691	BAW56
6271	4822 209 80891	MC78M05CT
6275	4822 209 72042	MC78L05ACP
6300	5322 130 31928	BAS16
6301	4822 130 81375	BZX84-C3V9
6305	5322 130 34337	BAV99
6325	5322 130 32835	BZX84-C5V1
6326	5322 130 32835	BZX84-C5V1
6327	5322 130 32835	BZX84-C5V1
6328	5322 130 32835	BZX84-C5V1
6329	5322 130 32835	BZX84-C5V1
6330	5322 130 32835	BZX84-C5V1
6331	5322 130 32835	BZX84-C5V1
6332	5322 130 32835	BZX84-C5V1
6333	5322 130 32835	BZX84-C5V1
6360	5322 130 31928	BAS16
6366	4822 130 80622	BAT54
6367	4822 130 80622	BAT54
6370	5322 130 32103	BAT83
6384	4822 130 80622	BAT54
6385	5322 130 34337	BAV99
6395	5322 130 31928	BAS16
6405	5322 130 31928	BAS16
6406	4822 130 80622	BAT54

7103	5322 130 41982	BC848B
7130	5322 130 41982	BC848B
7132	5322 130 41982	BC848B
7134	5322 130 41982	BC848B
7135	5322 130 41983	BC858B
7136	5322 130 41982	BC848B
7137	4822 130 42131	BF550
7180	5322 130 41982	BC848B
7190	4822 209 60792	74HC4053D
7195	5322 130 41982	BC848B
7205	4822 209 60792	74HC4053D
7211	5322 130 41982	BC848B
7217	4822 130 42353	BFS19
7220	4822 209 60792	74HC4053D
7221	5322 130 41982	BC848B
7225	5322 130 41982	BC848B
7227	5322 130 41983	BC858B
7230	5322 130 41982	BC848B
7242	5322 130 41983	BC858B
7243	5322 130 41982	BC848B
7251	4822 130 42614	BC849C
7255	5322 130 41982	BC848B
7257	5322 130 41982	BC848B
7300	4822 209 90226	OTP VERSION
7300	4822 209 90205	OTP VERSION (VS82505T)
7301	5322 130 41983	BC858B
7302	5322 130 41983	BC858B
7303	4822 209 90203	TDA4820T
7312	5322 130 41982	BC848B
7316	5322 130 41982	BC848B
7360	5322 130 60503	BSR15
7368	5322 130 41982	BC848B
7394	5322 130 41982	BC848B
7395	5322 130 41982	BC848B
7405	4822 209 33114	MC68HC68T1
7421	5322 130 41982	BC848B
7423	5322 130 41982	BC848B
7424	5322 130 41982	BC848B
7430	4822 209 33951	SA555D

Junction box 1140

1500	4822 212 31963	JUNCTION PANEL COMPLETE
1500	4822 212 31966	JUNCTION PANEL COMPLETE (VS82505T)
	4822 256 30274	FUSE HOLDER
1000	4822 265 31263	PTT PLUG
1001	4822 265 31263	PTT PLUG
1002	4822 265 31263	PTT PLUG
1003	4822 265 31263	PTT PLUG
1131	4822 242 81268	RESONATOR
1132	4822 265 31262	3 PINS
1150	4822 265 31265	6 PINS
1201	4822 265 40596	2 PINS MALE
1203▲	4822 070 31002	FUSE 1A

2000	4822 124 41579	10µF 20% 50V
2001	4822 124 41579	10µF 20% 50V
2002	4822 124 41579	10µF 20% 50V
2003	4822 124 41579	10µF 20% 50V
2020	5322 122 32654	22nF 10% 63V
2049	4822 122 33797	47nF 20% 50V
2050	4822 126 13497	68pF 5% N470 50V
2051	5322 122 33861	120pF 10% 50V
2052	5322 122 33861	120pF 10% 50V
2053	4822 124 41579	10µF 20% 50V
2054	4822 124 41579	10µF 20% 50V
2059	4822 122 33177	10nF 20% 50V
2060	5322 122 32654	22nF 10% 63V
2064	5322 122 34123	1nF 10% 50V
2079	4822 124 22263	220µF 20% 25V
2100	4822 124 41579	10µF 20% 50V
2101	4822 124 41579	10µF 20% 50V
2102	4822 124 41579	10µF 20% 50V
2103	4822 124 41579	10µF 20% 50V
2104	4822 122 33515	82pF 5% 63V
2106	4822 122 33515	82pF 5% 63V
2109	4822 122 33515	82pF 5% 63V
2110	4822 122 33515	82pF 5% 63V
2112	4822 122 33496	100nF 10% 63V
2130	4822 124 40433	47µF 20% 25V
2131	5322 122 32654	22nF 10% 63V
2132	4822 121 41857	10nF 5% 250V
2133	4822 122 33891	3.3nF 10% 63V
2134	5322 122 32659	33pF 5% 50V
2135	5322 122 32659	33pF 5% 50V
2136	5322 122 34123	1nF 10% 50V
2138	5322 126 10223	4.7nF 10% 63V
2150	4822 124 41579	10µF 20% 50V
2151	4822 124 41579	10µF 20% 50V
2153	4822 124 41579	10µF 20% 50V
2156	5322 122 33861	120pF 10% 50V
2157	4822 122 33797	47nF 20% 50V
2158	5322 122 33861	120pF 10% 50V
2159	5322 122 33861	120pF 10% 50V
2160	4822 126 13497	68pF 5% N470 50V
2200	4822 124 41525	100µF 20% 25V
2201	4822 124 22263	220µF 20% 25V
2202	4822 124 81125	470µF 20% 35V
2203	4822 124 22263	220µF 20% 25V
2204	4822 124 22263	220µF 20% 25V
2205	4822 124 41556	100µF 20% 385V
2206	4822 124 40756	1µF 20% 100V
2207	4822 124 41525	100µF 20% 25V
2208	4822 124 40756	1µF 20% 100V
2209	5322 122 32654	22nF 10% 63V
2210	4822 121 51252	470nF 5% 63V
2211	4822 126 11232	180nF 10%
2212	4822 126 11232	180nF 10%
2213	4822 124 41579	10µF 20% 50V
2214	5322 122 34099	470pF 10% 63V
2215	5322 122 34099	470pF 10% 63V
2216	4822 122 32576	2.2nF 400V
2217	4822 122 33797	47nF 20% 50V
2218	4822 122 32899	100pF 10%B 500V
2220	4822 122 33802	2.2nF 10% B 1KV
2221	4822 122 33802	2.2nF 10% B 1KV
2222	5322 121 44222	330nF 20% 250V
2223	5322 122 34123	1nF 10% 50V
2224	5322 122 34123	1nF 10% 50V
2226	5322 122 34099	470pF 10% 63V
2227	4822 122 33802	2.2nF 10% B 1KV
2228	4822 122 40606	22nF 80% 50V
2229	4822 121 41857	10nF 5% 250V
2300	4822 122 32576	2.2nF 400V
2350	5322 122 34123	1nF 10% 50V

3000	4822 051 20103	10k 5% 0.1W
3001	4822 051 20222	2k2 5% 0.1W
3002	4822 051 20222	2k2 5% 0.1W
3003	4822 051 20103	10k 5% 0.1W
3004	4822 051 20222	2k2 5% 0.1W
3005	4822 051 20103	10k 5% 0.1W
3006	4822 051 20222	2k2 5% 0.1W
3007	4822 051 20103	10k 5% 0.1W
3008	4822 117 11496	62Ω 1% 0.1W
3009	4822 117 11496	62Ω 1% 0.1W
3010	4822 117 10361	680Ω 1% 0.1W
3011	4822 117 11496	62Ω 1% 0.1W
3012	4822 117 11496	62Ω 1% 0.1W
3013	4822 117 10361	680Ω 1% 0.1W
3014	4822 117 11496	62Ω 1% 0.1W
3015	4822 117 11496	62Ω 1% 0.1W
3016	4822 117 10361	680Ω 1% 0.1W
3017	4822 117 11496	62Ω 1% 0.1W
3018	4822 117 11496	62Ω 1% 0.1W
3019	4822 117 10361	680Ω 1% 0.1W
3020	4822 051 20103	10k 5% 0.1W
3021	4822 051 20103	10k 5% 0.1W
3023	4822 051 20221	220Ω 5% 0.1W
3024	4822 051 20221	220Ω 5% 0.1W
3025	4822 051 20221	220Ω 5% 0.1W
3026	4822 051 20221	220Ω 5% 0.1W
3027	4822 051 20221	220Ω 5% 0.1W
3028	4822 051 20221	220Ω 5% 0.1W
3030	4822 051 20472	4k7 5% 0.1W
3031	4822 051 20472	4k7 5% 0.1W

Spare parts lists

3032	4822 051 20472	4k7 5% 0.1W
3033	4822 051 20472	4k7 5% 0.1W
3035	4822 051 10102	1k 2% 0.25W
3050	4822 051 20101	100Ω 5% 0.1W
3051	4822 051 20101	100Ω 5% 0.1W
3052	4822 051 10102	1k 2% 0.25W
3054	4822 051 20109	10Ω 5% 0.1W
3055	4822 051 20229	22Ω 5% 0.1W
3056	4822 051 20229	22Ω 5% 0.1W
3057	4822 051 20101	100Ω 5% 0.1W
3058	4822 051 20101	100Ω 5% 0.1W
3059	4822 051 10102	1k 2% 0.25W
3060	4822 051 20471	470Ω 5% 0.1W
3061	4822 051 20103	10k 5% 0.1W
3062	4822 051 20101	100Ω 5% 0.1W
3063	4822 051 20101	100Ω 5% 0.1W
3064	4822 100 20166	10k POTMETER
3069	4822 051 20339	33Ω 5% 0.1W
3070	4822 051 20339	33Ω 5% 0.1W
3071	4822 051 20101	100Ω 5% 0.1W
3072	4822 051 20101	100Ω 5% 0.1W
3073	4822 051 20331	330Ω 5% 0.1W
3074	4822 051 20103	10k 5% 0.1W
3075	4822 051 20104	100k 5% 0.1W
3076	4822 051 20224	220k 5% 0.1W
3077	4822 051 20222	2k2 5% 0.1W
3078	4822 051 20561	560Ω 5% 0.1W
3079	4822 051 20222	2k2 5% 0.1W
3080	4822 051 20229	22Ω 5% 0.1W
3100	4822 051 20103	10k 5% 0.1W
3101	4822 051 20153	15k 5% 0.1W
3102	4822 051 20103	10k 5% 0.1W
3103	4822 051 20153	15k 5% 0.1W
3104	4822 051 20153	15k 5% 0.1W
3105	4822 051 20103	10k 5% 0.1W
3106	4822 051 20103	10k 5% 0.1W
3107	4822 051 20153	15k 5% 0.1W
3108	4822 051 10102	1k 2% 0.25W
3109	4822 051 10102	1k 2% 0.25W
3110	4822 051 10102	1k 2% 0.25W
3111	4822 051 20472	4k7 5% 0.1W
3112	4822 051 10102	1k 2% 0.25W
3113	4822 051 20109	10Ω 5% 0.1W
3121	4822 051 20472	4k7 5% 0.1W
3122	4822 051 20121	120Ω 5% 0.1W
3123	4822 051 20339	33Ω 5% 0.1W
3124	4822 051 20471	470Ω 5% 0.1W
3125	4822 117 11149	82k 1% 0.1W
3126	4822 051 20104	100k 5% 0.1W
3127	4822 051 20103	10k 5% 0.1W
3128	4822 116 52257	22k 5% 0.5W
3129	4822 051 20103	10k 5% 0.1W
3130	4822 051 20103	10k 5% 0.1W
3131	4822 051 20103	10k 5% 0.1W
3132	4822 051 20103	10k 5% 0.1W
3133	4822 051 20103	10k 5% 0.1W
3134	4822 051 20473	47k 5% 0.1W
3135	4822 051 10102	1k 2% 0.25W
3136	4822 051 20103	10k 5% 0.1W
3137	4822 051 10102	1k 2% 0.25W
3138	4822 051 20224	220k 5% 0.1W
3139	4822 051 20121	120Ω 5% 0.1W
3140	4822 051 20103	10k 5% 0.1W
3142	4822 051 20332	3k3 5% 0.1W
3143	4822 051 20103	10k 5% 0.1W
3144	4822 051 20103	10k 5% 0.1W
3145	4822 051 20103	10k 5% 0.1W
3146	4822 051 20103	10k 5% 0.1W
3147	4822 051 20103	10k 5% 0.1W
3149	4822 100 11391	330Ω POTMETER
3150	4822 051 20101	100Ω 5% 0.1W
3151	4822 051 20132	1k3 5% 0.1W
3152	4822 051 20271	270Ω 5% 0.1W
3153	4822 051 10102	1k 2% 0.25W
3154	4822 051 20562	5k6 5% 0.1W
3155	4822 051 20392	3k9 5% 0.1W
3156	4822 051 20109	10Ω 5% 0.1W
3157	4822 051 20472	4k7 5% 0.1W
3158	4822 117 11496	62Ω 1% 0.1W
3159	4822 117 11496	62Ω 1% 0.1W
3160	4822 051 20331	330Ω 5% 0.1W
3161	4822 051 20221	220Ω 5% 0.1W
3162	4822 051 20472	4k7 5% 0.1W
3163	4822 051 20101	100Ω 5% 0.1W
3164	4822 051 20101	100Ω 5% 0.1W
3165	4822 051 20103	10k 5% 0.1W
3166	4822 051 20103	10k 5% 0.1W
3167	4822 051 20472	4k7 5% 0.1W
3170	4822 117 11373	100Ω 1%
3171	4822 117 11373	100Ω 1%
3199	4822 051 20221	220Ω 5% 0.1W
3200	4822 051 20221	220Ω 5% 0.1W
3201	4822 051 20472	4k7 5% 0.1W
3202	4822 051 20563	56k 5% 0.1W
3203	4822 053 11108	1Ω 5% 2W
3204	4822 053 11108	1Ω 5% 2W
3205	4822 053 11108	1Ω 5% 2W
3206	4822 053 11108	1Ω 5% 2W
3207	4822 051 20681	680Ω 5% 0.1W
3208	4822 051 20681	680Ω 5% 0.1W
3209	4822 051 20681	680Ω 5% 0.1W
3210	4822 051 20681	680Ω 5% 0.1W
3211	4822 051 20124	120k 5% 0.1W
3212	4822 051 20474	470k 5% 0.1W
3213	4822 051 20103	10k 5% 0.1W
3214	4822 051 20472	4k7 5% 0.1W
3215	4822 117 10452	47k 5% 3W
3216	4822 053 20105	1M 5% 0.25W
3219	4822 116 30464	NTC
3220	4822 051 20154	150k 5% 0.1W
3221	4822 116 52283	4k7 5% 0.5W
3222	4822 116 52238	12k 5% 0.5W
3223	4822 116 52219	330Ω 5% 0.5W
3224	4822 116 52213	180Ω 5% 0.5W
3225	4822 116 52182	15Ω 5% 0.5W
3226	4822 116 52256	2k2 5% 0.5W
3227	4822 051 20272	2k7 5% 0.1W
3228	4822 117 11644	0Ω39 5% 1W
3229	4822 053 12104	100k 5% 3W
3229	4822 117 11488	33k 5% 3W (VS82505T)
3230▲	4822 052 10338	3Ω3 5% 0.33W
3231	4822 100 20166	10k POTMETER
3232	4822 053 20474	470k 5% 0.25W
3233	4822 117 11486	10M 10% 0.5W
3234	4822 051 20223	22k 5% 0.1W
3350	4822 051 20222	2k2 5% 0.1W
3355	4822 051 20471	470Ω 5% 0.1W

5050	4822 157 71342	COIL 6.25 MHz
5051	4822 157 53267	COIL 5.5 MHz
5052	4822 157 60122	COIL 4.7µH
5053	4822 157 60122	COIL 4.7µH
5100	4822 152 20679	COIL 4.7µH
5101	4822 152 20679	COIL 4.7µH
5102	4822 152 20679	COIL 4.7µH
5103	4822 152 20679	COIL 4.7µH
5130	4822 156 20972	COIL 416µH
5150	4822 157 63347	COIL 470µH
5152	4822 157 71342	COIL 6.25 MHz
5153	4822 157 60122	COIL 4.7µH
5154	4822 157 60122	COIL 4.7µH
5200	4822 157 63347	COIL 470µH
5201	4822 157 63347	COIL 470µH
5202	5322 157 52363	COIL 100µH
5203	4822 157 53062	COIL 100µH
5206	4822 157 53348	CHOKE

6002	5322 130 34337	BAV99
6008	4822 130 33698	BZX84-C10
6009	4822 130 33698	BZX84-C10
6011	4822 130 33698	BZX84-C10
6012	4822 130 33698	BZX84-C10
6014	4822 130 33698	BZX84-C10
6015	4822 130 33698	BZX84-C10
6017	4822 130 33698	BZX84-C10
6018	4822 130 33698	BZX84-C10
6036	4822 130 33708	BZX84-B6V8
6125	4822 130 81375	BZX84-C3V9
6127	5322 130 31928	BAS16
6150	5322 130 80948	BAT74
6152	5322 130 31928	BAS16
6199	4822 130 80928	BZX79-C30
6200	5322 130 24081	BT151-500R
6201	5322 130 32328	BYW29-200
6202	4822 130 42489	BYD33G
6203	4822 130 42489	BYD33G
6204	4822 130 30621	1N4148
6205	4822 130 30621	1N4148
6206	4822 130 42489	BYD33G
6207	4822 130 30621	1N4148
6228	4822 130 31933	1N5061
6229	4822 130 31933	1N5061
6230	4822 130 30621	1N4148
6352	5322 130 31928	BAS16

7000	5322 130 41983	BC858B
7001	5322 130 41983	BC858B
7002	5322 130 41983	BC858B
7003	5322 130 41983	BC858B
7005	5322 209 12278	74HC4052D
7006	5322 130 41982	BC848B
7007	5322 130 41982	BC848B
7035	5322 130 41982	BC848B
7050	4822 130 42353	BFS19
7051	4822 130 42353	BFS19
7052	5322 130 41982	BC848B
7053	5322 130 60505	BCV62
7054	5322 130 41982	BC848B
7057	5322 130 60504	BCV61
7058	4822 130 60515	BF992
7100	4822 130 42353	BFS19
7101	4822 130 42131	BF550
7102	5322 130 41983	BC858B
7103	5322 209 61482	74HC4066D
7128	5322 130 41983	BC858B
7129	5322 130 41983	BC858B
7130	5322 130 41982	BC848B
7131	5322 130 41982	BC848B
7132	5322 130 41982	BC848B
7133	4822 209 90122	SC87C51ACN40
7150	4822 130 60516	BC859C
7151	5322 130 41983	BC858B
7152	4822 130 63727	IMT5
7154	5322 130 41982	BC848B
7199	5322 130 41982	BC848B
7200	5322 209 86445	MC78M05BT
7201	5322 130 41982	BC848B
7202	5322 130 41982	BC848B
7203	5322 130 42631	BD533
7205	5322 130 41983	BC858B
7206	5322 130 41983	BC858B
7207	5322 130 41983	BC858B
7208	5322 130 41983	BC858B
7209	4822 130 10025	CNX82A
7211	4822 130 61713	BUK445-600B
7212	5322 130 42631	BD533
7213	4822 209 33996	UC2842AN
7230	5322 130 41982	BC848B
7353	5322 130 60503	BSR15